

JOURNAL

of The American Institute of Architects

December 1958



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of The American Institute of Architects

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The Cover shows Petticoat Lane, Kansas City, transformed by the removal of traffic into a pedestrian's dream, complete with fountains and a second floor sidewalk cafe to the right. See article on page 21.

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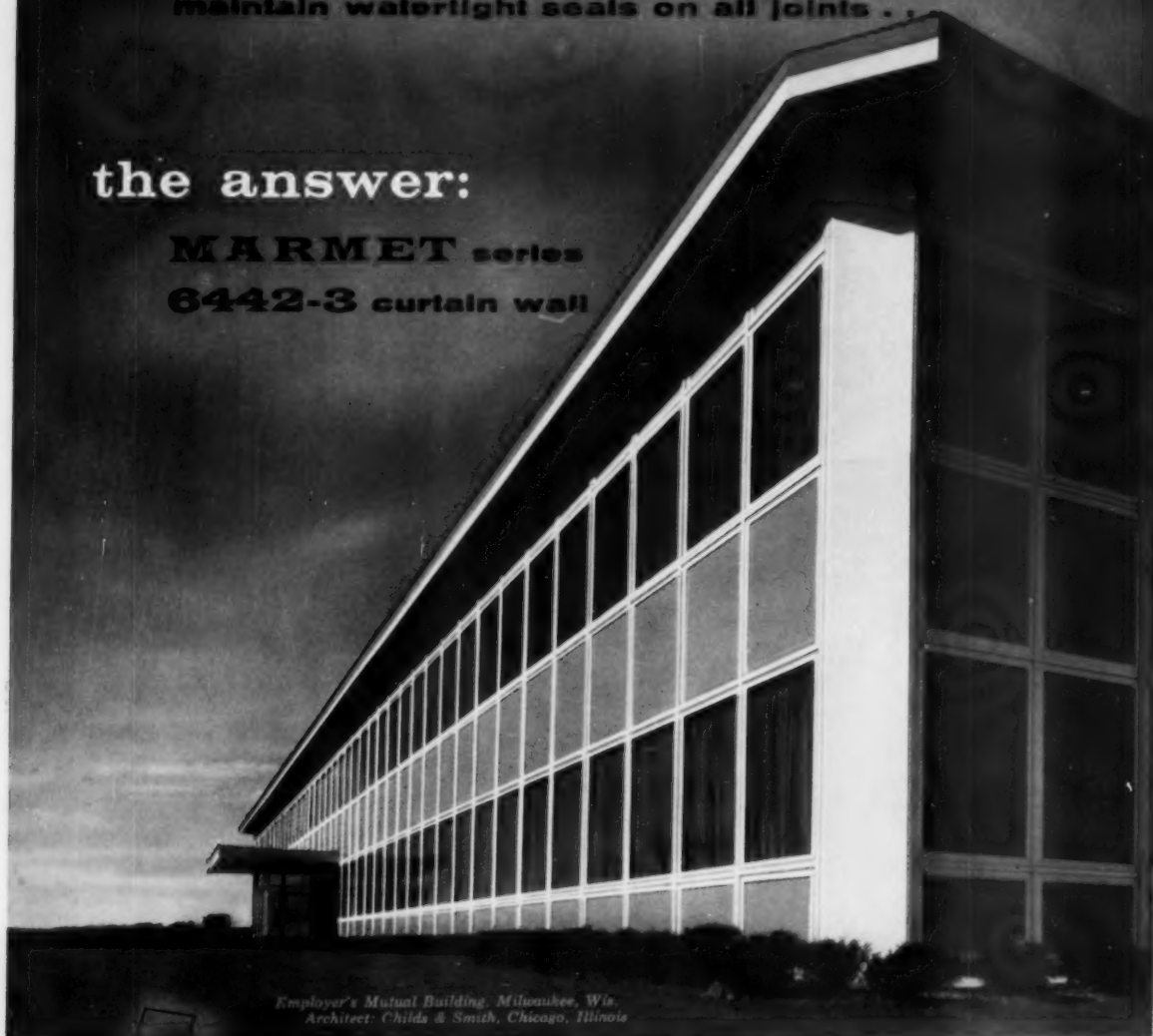
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The Fifth Congress of the UIA—Moscow

THE FIFTH CONGRESS of the UIA was held in Moscow last July, and was attended by over one thousand architects from fifty-two countries. The Congress discussed the need for the architects of the world to concern themselves with urbanism—especially in the field of housing. Because of the special nature of their training, architects are particularly equipped with the necessary disciplines requisite for the task of solving the problems brought about by expanding population and the growth of cities. Because of the great changes that are taking place in our time it is essential that the development of our cities be based upon the most advanced scientific methods. This development should regard the following principles:

1. NATIONAL PLANNING AND CITY PLANNING

In order to make the fullest utilization of the resources of a country it is necessary that planning be on a national scale, having to do with the locations of industries and allied activities. This plan then should be the base for the growth of existing cities, for the establishment of new cities and, if necessary, of satellite cities. It also may be necessary to limit the growth of large cities. A regional plan is a prelude to the study of the plan of a complete city, for it is through its periphery that the city contacts its region.

2. STRUCTURE OF THE CITY

Given a long-term master plan of a city, plans can then be developed for the principal elements of the city's structure: housing, working areas and civic areas, green spaces, traffic circulation and public services.

3. HOUSING

Housing should be conceived on the basis of neighborhood units. The ideal dimensions of the neighborhood unit should be determined by its economic, geographic and social conditions.

As to the density of population, it is possible to formulate certain principles: the number of people per given area should be based upon the total floor area and volume of housing provided. Except under exceptional conditions, it should not be linked to the economic level of the inhabitants.

4. CIRCULATION

The enormous increase in the amount of traffic in modern cities requires that drastic steps be taken lest the life of the inhabitants of the cities of tomorrow become intolerable. These conditions may be combated by such steps as follows:—By a reason-

able redivision of residential quarters and business or working areas.—By restudy of the transport requirements of the area, of the city and of the region.—By a rigorous separation of different types of arteries.—By the establishment of a decentralized system of parking.—By the creation of new streets and pedestrian ways.

5. URBAN ESTHETICS

The city must be responsive not only to functional needs, technical considerations, and economic and social conditions, but also to esthetic considerations which will give it a personality with which inhabitants can identify themselves. Furthermore, realizing the vast programs of construction involved and the complexity of automobile highways, etc., it is essential to find and retain the feeling for human scale. The monotony of rigid housing must be avoided; the need is for variety, for interest created by freedom in the placement of buildings, by the use of different materials, and by the use of color. There is a place in urbanism for the monumental, but in the residential zones themselves the objective should be the creation of agreeable human living conditions.

6. LEGISLATIVE, ECONOMIC AND SOCIAL CONSIDERATIONS

In all economic planning it is essential to maintain a coordination between city plans, with each tied to its regional plan and to the master plans of the individual cities.

The normal development of a city should be under the supervision of the local government. An architect in charge, with a staff of qualified assistants, should be given authority to supervise the planning of his area.

It is essential that rulings relating to urbanism should be frequently reviewed in order to prevent new ideas from being stifled by obsolete regulations and bureaucratic control. The Union Internationale des Architectes believes that the architect is the logical person to direct the development of urbanism, and it calls upon the governments of the communities of the world to become aware of the need for legislation which will enable such broad master planning.

The Executive Committee of the UIA took up numerous items of business, and selected Lisbon as the site for the 1959 Assembly to be held in September. The theme will be "New Materials and Techniques in Architecture." The Sixth Congress will be held in London in 1961.



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Letters to the Editor...

BOUQUETS

EDITOR, *Journal of the AIA*:

Mr. Mumford's forcible and provocative criticism of the remodelling of the Pennsylvania Station deserves the serious consideration of practicing architects, architectural educators and students of architecture.

When such a distinguished firm of architects who were commissioned to do this work can bastardize and ruin so completely the great spatial and functional aspect of a noble interior by completely ignoring the architectural character and quality of this masterpiece of American Architecture, it is time for the architectural profession to pause and to review and evaluate its philosophy of architectural design. (If it has one.)

The dogmatists of the present era are doing as great a disservice to the profession as the eclectics whom they have decried for the past half century or more.

It is to be hoped that the *Journal* will continue to publish more and more of the criticisms by respected critics, architects and even laymen, of contemporary design and thus continue to perform an even greater service to all of us who are interested in architecture either as academicians or as practicing architects.

It is time for the profession to take serious note of its failures or successes.

Mr. Mumford made a very pointed statement when he wrote:

"No one now entering Pennsylvania Station for the first time could, without clairvoyance, imagine how good it used to be in comparison to the almost indescribable botch that has been made of it."

P. M. TORRACA, AIA
Department of Architecture
University of Florida

EDITOR, *Journal of the AIA*:

Just a note to say the *Journal* is becoming more useful to us every month. Keep up the good work.

WILLIAM W. CAUDILL, AIA
Corning, New York

EDITOR, *Journal of the AIA*:

I find many of the articles in the *Journal* instructive and valuable. Bendiner's page, particularly his September contribution, is inspiring and comforting. That you publish this stuff is a tribute to your sense of humor and to your feeling for balance and values. These, after all, seem pretty much one and the same thing.

FRANK STANTON
Seattle, Washington

EDITOR, *Journal of the AIA*:

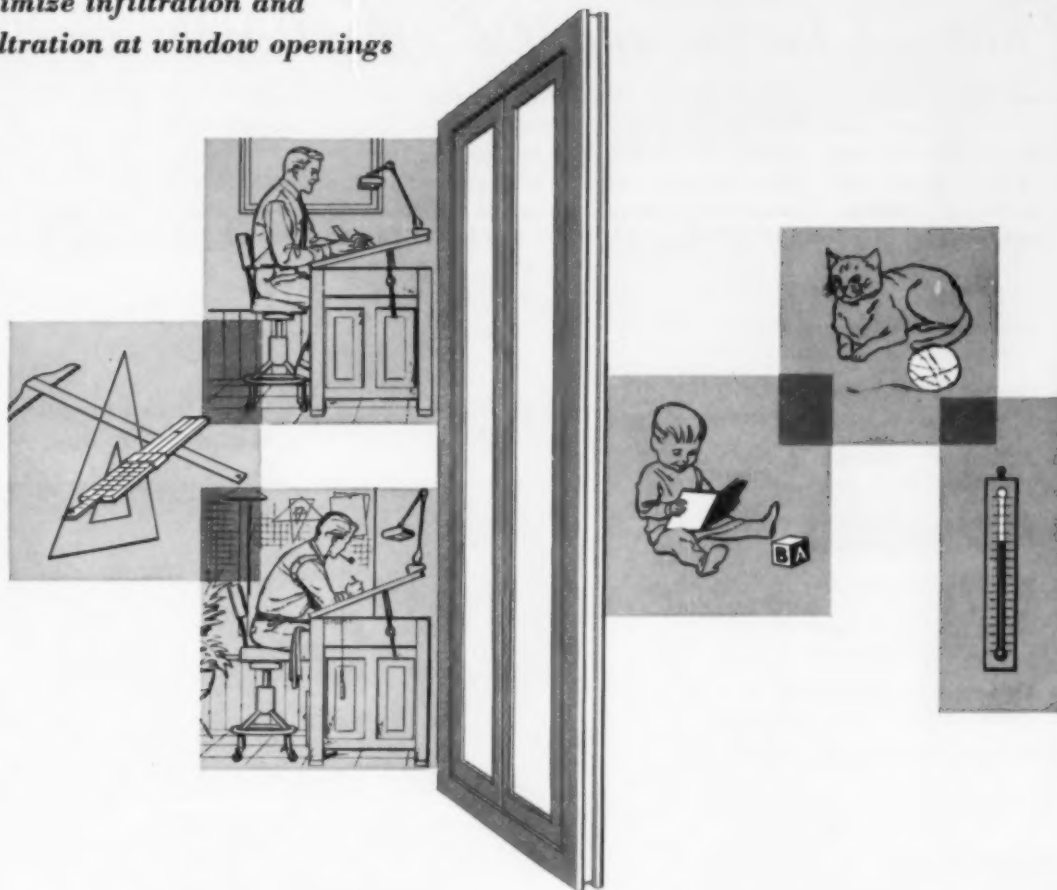
I was gratified to receive the *AIA Journal* for October and find on page 51 the five sonnets entitled "City and Citizen." Thank you for giving me the opportunity for reaching some of my confreres in architecture, and thank you no less for reprinting Lewis Mumford's piece on the "Disappearance of the Pennsylvania Station."

Bob McLaughlin had sent me an advance copy of his article on Architectural Research. I am glad indeed to see it appear in the *Journal*. I have not had a chance to read Henry Churchill's article on Urban Esthetics. I am such an admirer of Henry I am sure I will like it.

ARTHUR C. HOLDEN, FAIA
New York

EDITOR'S NOTE: *Many thanks, Arthur. Frankly, we are proud of the October issue. We consider it the best "reading" issue we have gotten out yet!*

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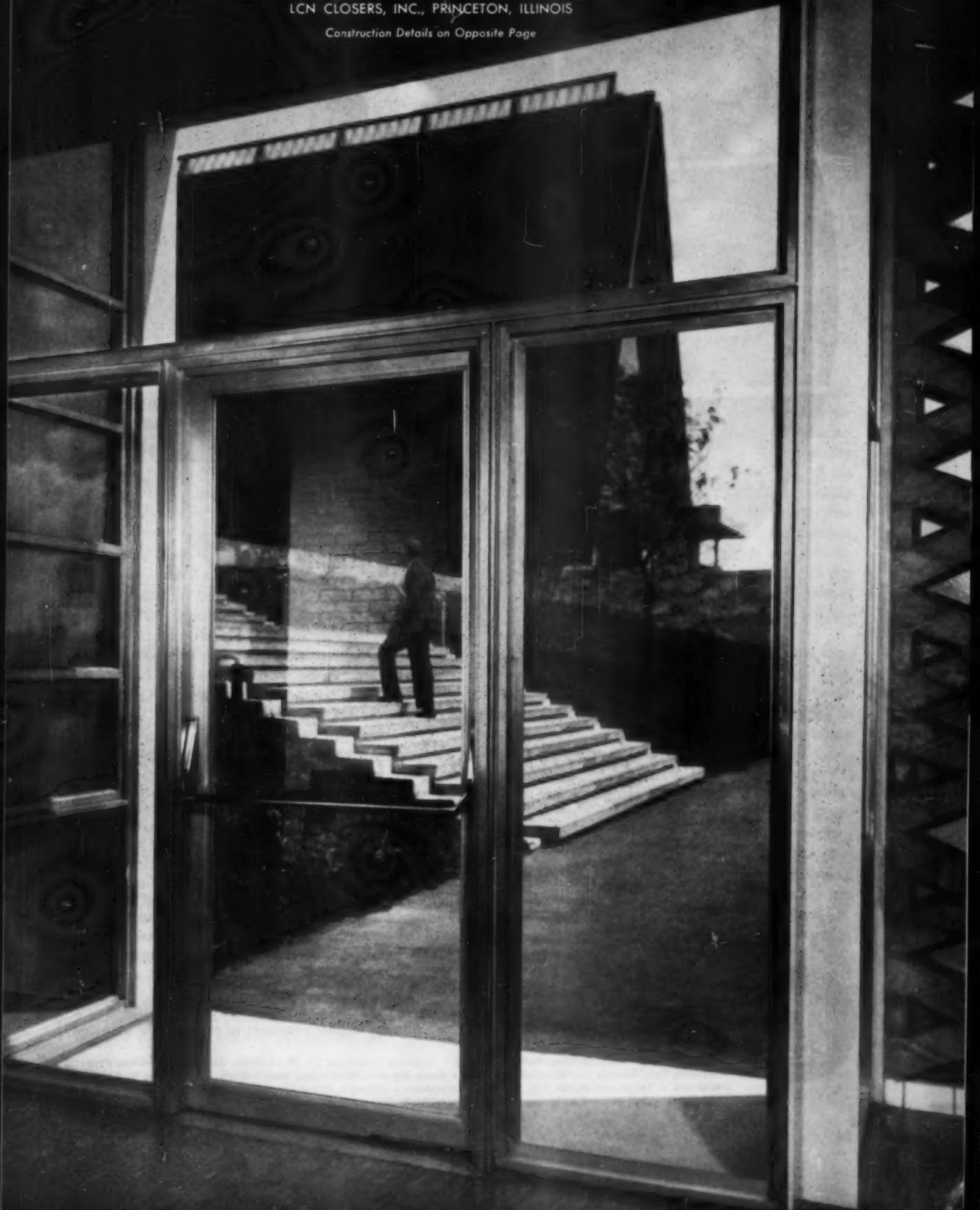
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Environment for Business and Industry

JEAN LABATUT

Director of Graduate Studies, School of Architecture, Princeton University

THE FOLLOWING REMARKS are not theory, nor the result of second hand information, but the result of actual experience on the site, "à pied d'oeuvre."

"Planning Man's Physical Environment" was the theme proposed and selected in 1946 for the Princeton Bicentennial Conference. The present theme "Environment for Business and Industry" is more specific and at the same time much broader. More specific because it deals only with business and industry, and much broader because it goes beyond the immediate surroundings, including mental and social furniture in individual worlds.

Millions know how to build a wall, too few, indeed too few, know where to put it, and what are the physical and psychological values of the usable spaces created on each side of that wall, or through that wall if it is of a transparent type.

The visual aspects, or surroundings, thus created are the product of what we call urban planning, landscape architecture and architecture. These visual aspects are the most tangible expression of physical and psychological needs and desires for usable space, whatever the quality of that space, however uplifting or depressing it may be to the individual.

These visual aspects around us are, at a given time, our common surroundings and a part of our highly selective and personal environment. It is well recognized that a man and his dog have the same surroundings, but they have a different environment. And we have learned recently, and at high cost, not to underestimate the power of a dog. Things are still as we are and not as they are.

Our understanding and enjoyment of our surroundings or architectural composition of which we are a center in motion depends 1) on the radiating power of those surroundings and 2) on the quality of our power of perception. No wonder, then, if the same surroundings can provoke enthusiasm, simple approval or plain disapproval. As a result, and according to each individual, any single solution expresses temerity or timidity, courage or cowardice. The same solution unacceptable yesterday to the members of a Planning Commission or to a Board of Directors or Trustees will be acceptable tomorrow by the same people.

I recall the meeting of a Board of Directors. One of the members had been informed by high authority that modern architecture was the result of the depression of the early thirties. Acting as consultant, I had only to refer to one historical fact—the remarkable planning of a modern and complete industrial city made in 1900 by a pioneer, the architect Tony Garnier. That was over a quarter of a century before the depression in question. That same member of the Board being near the borderline between the old and the new, between the past and the present, told me later "Your reasoning pushed me over the fence." As a result a reasonable approach was chosen. It was a normal approach for the majority, a daring one for others, and a scandalous one for a few laggards.

Twenty-two years ago I was analysing a most successful experiment in decentralization of industry and population in a one-industry village which came into existence in 1889, in England, near Liver-

pool, at Port Sunlight, and created by Lever Brothers. This is the statement by the son of the promotor: "My father was not a philanthropist, but he wanted his employees happy when coming to work." This was well over half a century ago. How slow man can be in an industrial society, in an age of speed! It is a situation comparable to a powerful car caught for hours in a traffic jam or comparable to a bull in a china shop, in short, waste of time and energy.

I was always intrigued by the motto of the industrial city of Trenton, New Jersey, that is "Trenton makes—the world takes." But the world took so much from Trenton, and so little was kept for subsistence that the city reminds me of an undernourished and overmilked cow. Thirty years ago the mention of obviously needed free space within the city of Trenton was enough for me to be called a dreamer or a madman, but it is interesting to note that for a circulation-interchange alone within the downtown area there is now an open space larger than one of the largest plazas in Europe, the Place de la Concorde in Paris. I make that comparison for only two reasons 1) the possible manipulation of space in old cities and, 2) the great difference in physical and psychological values which can be given to space whatever the size.

We are slowly waking up, but how long will it take the majority to wake up? "Antiques" are still manufactured, buildings in one style or another are still rising in the same way as counterfeiters are producing false money. The only difference is that some counterfeiters go to jail while others are being congratulated for their ability to copy and for creating confusion between the past and the present.

But the situation is improving at an increasing rate. Rehabilitation of space, creation of well organized spaces between buildings as well as in buildings are replacing old dilapidated and wasteful downtown districts. Many business and industrial organizations are thinking about it, others are in the process of doing something about it, others are beginning to see results.

Business and industry have also moved toward the suburbs or the open countryside but still not aware of all the potentials thus offered. Here are a few examples:

(1) During the discussion relative to the location of a building there is always a moment when a choice exists. It is that choice which can make the difference between uniqueness and banality, between beauty and vulgarity. There is always the somewhat childish temptation to locate a building smack in the center of a plot or open space without any further reason, one of the most wasteful uses of space.

(2) There is still the dominant idea, somewhat too easy, that a building should be by itself and for itself, stark naked instead of dressed in a landscape in order to create delightful surprises. The art of landscaping is too often minimized by the abuse of bulldozers and the resultant planting of little shrubs or bushes which we call dog toilets or which can be glorified by the title of dog paradises.

(3) The antiquated way of advertising by billboards is still in use. The memory of a dignified landscape or spectacle seen for a few seconds is much more effective than the memory of an endless procession of billboards comparable to a pageant of street walkers extending into the countryside.

(4) Very few examples exist today of a complete synchronization of the effect of natural light with manufactured light in a day and night composition and symphony. The esthetic use of sunlight is neglected for the simple reason that sunlight is not for sale. If for sale, everybody would plan to buy some of it, and at a high price. But manufactured light is for sale so we see the most outrageous and indecent abuses contributing to the street walker pageant already mentioned.

(5) Very few studies exist of modern temporal architecture. That is the recognition of time-space architecture composed of sequences and modulations for the benefit of a fast-moving driver and slow-moving pedestrian—an old architectural tool long forgotten.

Business and industry are on their way to contribute to the best architectural compositions of our time by rehabilitating space within cities or by adopting the principle of dispersion. By moving in wide open spaces, they will become the new type of country estates—that is business and industrial country estates with their buildings and terminal facilities integrated with gardens and parks, and this for reason of long range economy as well as for reason of sound advertising. Business and industry offer the architect, the landscape architect, the engineer, the sculptor, the painter, or inventors, artists and craftsmen known by any other professional titles, the opportunity to apply science toward a type of esthetic expression yet unknown.

Somewhat in anticipation I was called as early as 1940 to plan such an industrial country estate including water and light spectacles, but World War II interfered with the realization.

One of the business and research centers developed since the war has been called an "Industrial Versailles." Having analysed it and also knowing Versailles well, it is obvious to me that someone was bragging. I may say, however, that I found some common denominators, as for example

the use of the maximum of means in order to produce an effect, also in the common effort of the stylists of the XVIIIth and XXth centuries in the art of transmutation, the stylists of the XXth century struggling to make a car look like a jukebox or like a one-arm-bandit-gambling-machine, while the stylists of the XVIIIth century also struggled in making ladies of the court out of questionable women.

So here again we reach the threshold of the "sens de la mesure" . . . where and when to stop.

There were times when the Roman villa, the

chateau, the casa de campo, the country estate, were focal points in the landscape; now it is the turn of business and industry.

The working gloves are different but duties and privileges are basically the same. The great role to be played by business and industrial developments in relation to their physical and psychological environment is obvious. The expression "Noblesse oblige," which was used by some, is still in order. So is the term "much obliged" which was used by others. The only difference with the past is that today those two terms are expressed by both sides.

The First Architect

Sage archaeologists and paleontologists
Confront us with evidence quite irrefutable.
By a process of reasoning with logical seasoning
They present certain facts almost indisputable.
Thru man's slow progressions, his cherished possessions

Were gathered by women with caution and care,
For her spouse was a restless, rambling, possessless
Old hunter who wandered almost everywhere.
These gals were confronted by husbands who hunted
The deer and the bear from the Po to the Rhine,
And his luggage was carried by the gal he had married.

If she lagged or grew weary, he left her behind.
Her lot was degrading, she did all the spading,
She cut all the wood and she cooked all the food.
And at times she erected a shed which protected
Her spouse and her loot, tho its form was quite crude.

Their peregrinations were dotted with stations,
All soon deserted as game became rare.
The longer they stayed and the further they strayed
The more cherished treasure she had to leave there.
Then a gal named Aspasia from southern Eurasia
Rebelled at last at this incessant movement.
She tamed a few goats, a calf and some shoats,
And devised living standards which were quite an improvement.

For now she could rest and had time to invest
In animal husbandry and hybridization.
Though no one then told it, her actions unfolded
Steps toward a higher civilization.
More static conditions soon bred new ambitions

And permanent housing induced avocations.
New things were attempted and the bolder pre-empted

The final decisions on views and locations,
And things of importance soon changed in accordance

With a life increasingly sedentary.
Caliche and gravel, quite useless in travel
Were studied as products for flooring a dairy.
These girls soon devised many things which surprised
The men, who now had time to reflect.

Men analytical soon became critical
And held long discussions on cause and effect.
And a girl who invented quite often repented
When a critical spouse began his inspection.
For the lazy old bounder would often astound her
By curses and blows for her slightest defection.
At last they selected a brave who detected
A slight deviation in the slope of a shed,
This brave, Moriarity, became the authority
And everyone built just the way that he said.

Thus in the beginning when women were winning
Freedom from travel and a place to store treasure,
Men were effecting the art of erecting,
The gals did the work and the men had the pleasure.
Though history neglected to say who erected
The very first buildings, most students suspect
That old Moriarity by a claim of seniority
Was more than just likely the first Architect.
So girls he consoled, you claim, I am told
The credit for starting the oldest professions.
But the masculine critic, with mind analytic
Has perfected the housing of cherished possessions.

HUBERTUS JUNIUS.

Good Public Relations is Good Business

What One Chapter has Accomplished

ROBERT T. CLARK

*Chairman of the Public Relations Committee
of the Central New York Chapter*

18

A PROFESSIONAL ORGANIZATION without the services of a public relations counsel is somewhat like a young man winking at his girl friend in the dark. He knows he's winking—but she doesn't.

And so, architects, like other professional people whose ethics frown on direct advertising, find it advisable to engage consultants to assist in keeping the public informed on architectural services and activities.

Architects play a vital role in their community, state and nation. But do residents of those areas know it? Do architects spread enough information about their profession and its contribution to society? Actually, the public *is* interested in building design and construction, and it is the duty of architects to distribute information.

Realizing its public responsibility, the Central New York Chapter of The American Institute of Architects embarked upon a continuing public relations program in July 1955.

The Chapter called upon the services of an expert in public relations, Flack Advertising Agency of Syracuse, New York. The agency appointed an account executive who works in close cooperation with the chapter's Public Relations and Exhibition Committee, under a budget established annually.

During the Centennial year 1957, the chapter appropriated \$4,500 for public relations with \$3,500 going to its counsel in fees, and the remainder being spent on an essay contest conducted in 375 high schools in the organization's twenty-six county area. The chapter has voted \$3,500 for its 1958 public relations program.

During the last two and one-half years, the committee and counsel have written news stories about chapter meetings, appointments of members, AIA centennial events, in addition to advising individual members on specific problems. The major emphasis, however, has been on projects intended to educate the public as to the functions and services of an architect. Illustrations of this educational program follows:

Films

The chapter purchased the color film, "Architecture, USA," in 1956 for showing before clubs, schools, fraternal organizations and other local groups. Usually an architect introduced the movie and discussed architecture following it. In the case of a presentation before the Syracuse Press Club in the fall of 1957, the program developed into a news conference with the city's reporters interviewing three architects on regional development plans. "Architecture USA" was retired in the spring of 1958, when the Chapter purchased the two new AIA films, "A School For Johnny" and "What Is A House?"

Booklet

A 12-page illustrated booklet, "How An Architect Helps You Build Better" was written and produced for distribution by chapter members to potential clients, interested groups, and students during career day appearances.

Visits

The counsel regularly visits the editors and radio and TV station program managers in the chapter area to discuss coverage of architectural activities. All day visits for example, have been made to Watertown, Rochester, Utica, Binghamton, Ithaca, Auburn, and Elmira.

Interviews

Radio and television interviews, spot announcements, and telecasting the AIA films are other means of informing local audiences of the services of architects.

PR Kits

A kit containing a leaflet on public relations practices, sample news releases and suggestions for local publicity was sent to all members.

Centennial News

Observance of the 100th anniversary of the AIA in 1957 provided fresh sources of chapter publicity. A letter and editorial about the significance of the centennial were sent to all newspaper editors and columnists in the chapter area. In addition, news was released about chapter centennial events, the centennial convention, election of a chapter member to the College of Fellows last Spring, and the U S postage stamp issued to commemorate the AIA birthday.

Essay Contest

One of the most far-reaching efforts undertaken by the chapter in 1957 was an essay contest conducted in the 375 public, parochial and private high schools in northern, central and southern New York State. Theme of the essays was "Architecture—A Creative Force in America's Future." The \$400 first prize went to a Utica Catholic Academy senior, while three other students in other cities won honorable mention.

Guidance Counselors' Kits

In a further effort to aid young people and their parents, the chapter distributed architectural literature to the guidance counselors in the region's high schools. The kits contained a letter to the counselors and four pamphlets:

"How An Architect Helps You Build Better."
"Should You Be An Architect?" published by the New York Life Insurance Company.
"So You Want To Be An Architect?" and
"Facts About Architecture and Architects," available from AIA national headquarters.

Distribution of the kits was an idea developed by the chapter's Public Relations Committee and Education and Registration Committee.

Pictorial Feature

Last fall, with the cooperation of local architects, newspapers focused attention upon 100 years of architecture in the chapter region by publishing pictorial features showing the differences in the phys-

ical appearance of buildings constructed in 1857 and those being erected today.

Answer to Critics

Working with their PR counsel, the chapter's Committee on School Buildings, and the Public Relations Committee drafted a letter answering critics of school construction costs. In addition, the committees have completed a list of recent magazine articles and speeches that give an unbiased explanation of school building expenses.

Civic Leaders at Chapter Meetings

As an important aspect of its educational program, the chapter invites civic leaders and governmental officials to its meetings.

Newspaper Series

In the fall of 1957, counsel wrote, in collaboration with several chapter members, a series of six newspaper articles explaining the services that an architect offers his community. The series traces the services of an architect from the time he is first consulted until the day the structure is occupied.

The Future

As the chapter embarked upon its 1958 public relations activities, its projects included:

1. Placement of its newspaper series throughout the area.
2. Public service announcements to radio stations urging high school seniors to consider architecture as their college course.
3. Invitations to community leaders to attend chapter meetings featuring programs of interest to them.
4. Offer of a Kiplinger feature to the "Straight Edge," publication of the chapter. The feature points out the value of architects.
5. Additional stress will be placed upon the importance of individual architects speaking before clubs in their home communities. A Speakers Bureau has been formed.
6. A continuation of many activities that are routine in nature, such as distribution of films, advice to members, stories about chapter meetings and appointments, visits to newspapers and stations, and mailing of Guidance Counselor Kits and chapter booklets.

The committee feels that in addition to the public relations efforts described above, each member of the chapter contributes to the program by his participation in community activities and by his everyday activities in serving his clients.



KC/80

— an Urban Transfusion

J. DAVID MILLER, AIA

The Editor of Skylines, the excellent publication of the Kansas City Chapter, AIA, gives us a first-hand account of that Chapter's remarkable contribution to its city — a complete plan for the reclamation and redesign of the downtown area.

THE DEEP CONCERN felt by the Kansas City Chapter of the AIA in the fate of its Downtown Kansas City, Missouri, Central Business District culminated in a concentrated study and the development of a plan of action entitled "KC/80." Being a study of transportation and parking problems, pedestrian safety, revitalization of retail business, development of an expanded Civic Center, and an organization of the Downtown into an efficient and healthy heart of urban life, the project based its name on a vision of what Kansas City could be by 1980.

Never before had the Chapter spent so much time and effort on a single project—some 3000 man-hours of work donated to the city by its 180 total membership. The spirit of cooperation between Chapter members, the unquestioned sacrifices and the keen interest in the project has frankly astounded every member.

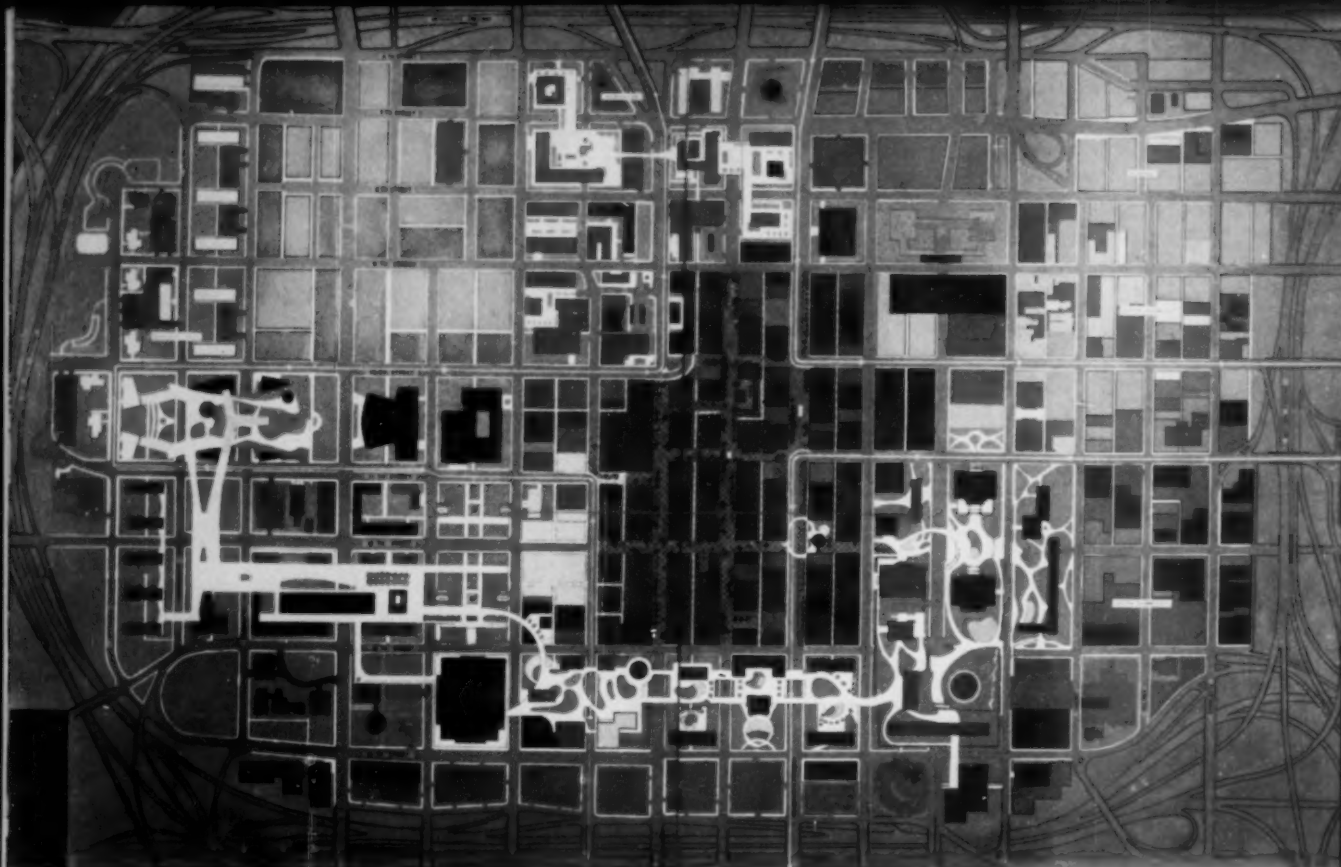
To give a general background explaining factors leading up to KC/80, let us start with the governmental and physical environment of Kansas City. First, the city has had for many years an aggressive

City Plan Commission. Governed by a six-citizen body appointed by the City Council, the City Plan Commission has a technical staff consisting of a Chief Planning Engineer, a Zoning and Land Planning Engineer, a Principal Planner and twenty-eight employees. This group has performed an extremely professional quality of work in all phases of City Planning. Almost fifteen years ago, it started work on a "loop" highway express system around the entire Central Business District, fed by seven major converging expressways from the outlying city. Now virtually two-thirds complete, the loop places Kansas City far ahead of most other cities in the country in making the Downtown easily accessible.

Another factor contributing to the apparent success of the KC/80 study is the terrain and physical makeup of the Central Business District itself. The city is located on the bluffs above the Missouri River at the mouth of the Kaw River. All major retail stores are in a compact twelve-block area surrounded by a reasonably stable belt of business, hotels and recreational buildings. The planning of the loop freeway eliminated the worst of the surrounding blighted areas and luckily occurred on terrain which was easy to develop without excessive costs.

A third contributing factor is an active slum clearance program by the Land Clearance for Redevelopment Authority. A decade ago enabling leg-

View of Civic Center portion of study from Southeast, with circular Planetarium in the center. Clockwise — starting with the bridge connected — Museum, Hall of Fame, Children's Museum, Public Library (under construction), Legal Office Building, and the existing Court House. City Hall is tallest building in the right background. Behind it the proposed Transportation Building, and to the right the State Office Building with attached auditorium.



Central Business District Master Plan, showing periphery road system, and darkened Retail Core (with closed-off streets) at center. Civic Center is at lower right. Areas now under Urban Renewal Development are Apartment and Housing section at extreme left and Office Building area at upper middle. Parking is provided in circle immediately adjacent to Retail Core. No portion of Retail Core is over two blocks from parking area.

isolation was secured from Missouri and the City Council to establish this Authority and put the slum clearance machinery in motion. Nearly one-fourth of the 435 acre Central Business District is in some form of redevelopment at the present time.

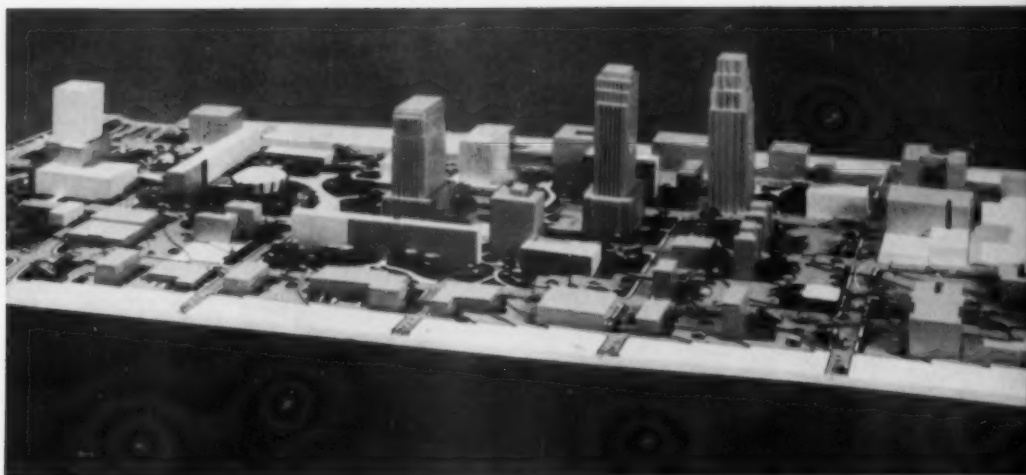
A fourth factor leading up to the KC/80 project is an active Downtown Committee of the Chamber of Commerce, continually searching for ideas to improve business—and, more important, willing to share in the costs involved in studies exploring new possibilities.

So here we have many conditions accelerating a new city core with two directions to go: either toward the realization of an organized Master Plan, or toward utter chaos. Realizing that the completion of the loop freeway would cripple the Downtown area with more cars converging faster than ever before, the Kansas City Chapter AIA became quite concerned. The annual budget for the able City Plan Commission had been cut for several years in a row and the Chapter had been asked several times to aid in developing plans for specific areas of the Central Business District. Late in 1956 an attempt was made to form a special corporation underwritten

by the Chapter to study and arrive at a solution for use of slum clearance land adjacent to the governmental area on the East side. (Progress was being swiftly made on the redevelopment of the West and North sides thru private interests). This attempt didn't get off the ground because of the feeling that the study was too limited in scope, involving only a few blocks isolated from the more important picture of an integrated Master Plan.

However, the interest generated by this attempt prompted the Chapter to call a meeting with the City Manager and the City Plan Commission on July 5th, 1957, to offer the services necessary to aid the City Plan Commission in a study of a long-range Master Plan—to be done over a period of approximately twelve months—with the Chapter contributing roughly 3000 man-hours and part of the actual expenses. This offer had a terrific impact and the publicity which appeared in the local newspaper during the following days was of more value public relations-wise than any of the individual Chapter members had been able to stir up in years!

The City offered an office in City Hall next to the City Plan Commission, and, equipped with desks



Model of Civic Center portion of study, grouping buildings of a civic nature around the existing City Hall, County Courthouse, Police Headquarters, and Parental Home.

and supplies from various Chapter offices, work began. Besides getting manpower behind the effort, there were many complex problems facing the design group—for what length of time was the study to be made; what was the present as well as the desired ultimate land use; how should traffic and parking be handled; for how many people was the design to be made; how much floor area was involved; what were the economic implications; how was public transit to be handled; and how was service for the area to be accomplished? Once these questions were analyzed and a general plan determined, specific details would have to be worked out—how much would be practical from the standpoint of street engineering; would there be acceptance or opposition from the various businesses affected; how would financing of such a project be accomplished by the City; and what legislative changes would be required?

The plan of organization quickly took shape under the guidance of the Community Development Committee. A Design Committee was appointed which met at least three times a week in the afternoons (many times until midnight). This Committee consisted of four Chapter members, a Landscape Architect, and two representatives of the City Plan Commission's Staff. One Chapter member of the Design Committee was placed part-time on the staff of the City Plan Commission and served as liaison man between the City and the Chapter. His thorough programming and work scheduling had perhaps more to do with the success of the study than any other single contribution. Another Chapter member of the Design Committee had done several consulting studies for the City Plan Commission and was well aware of the many problems involved.

Just as the project was getting underway, the time schedule was moved up. Due to a meeting in October, 1957, (only three months away) when the Downtown Committee of the Chamber of Commerce was planning a celebration to dedicate one leg of the loop freeway—and which was to have many city, state, and national dignitaries in attendance—the desire became apparent to complete much of the study by then.

The Chapter was urged by the City Plan Commission to concentrate on the development of a Civic Center plan for a nine square block area of the 435 acre Central Business District. This brought much opposition from the Design Committee, and the Chapter's portion of the study was expanded to include the Downtown Retail area, its surrounding parking facilities, the Transportation Center, and their interrelationship to the whole area. The City Plan Commission, in the meantime, was constructing a 1" = 100' scale model of the complete Central Business District.

The frantic struggle to complete the study in three months instead of twelve was a terrific load, but in a way it was a blessing because the urgency of the situation seemed to rally a more active Chapter participation.

With the assistance of many statistics and forecasts which the City Plan Commission had made and after many discussions and a careful analysis of the design, the KC/80 project drew to a surprising and gratifying close. It was unveiled October 7th, 1957 along with the City Plan Commission's model, and exhibits of Land Clearance and freeway achievements. It was then placed on display at one of the major department stores for public viewing,

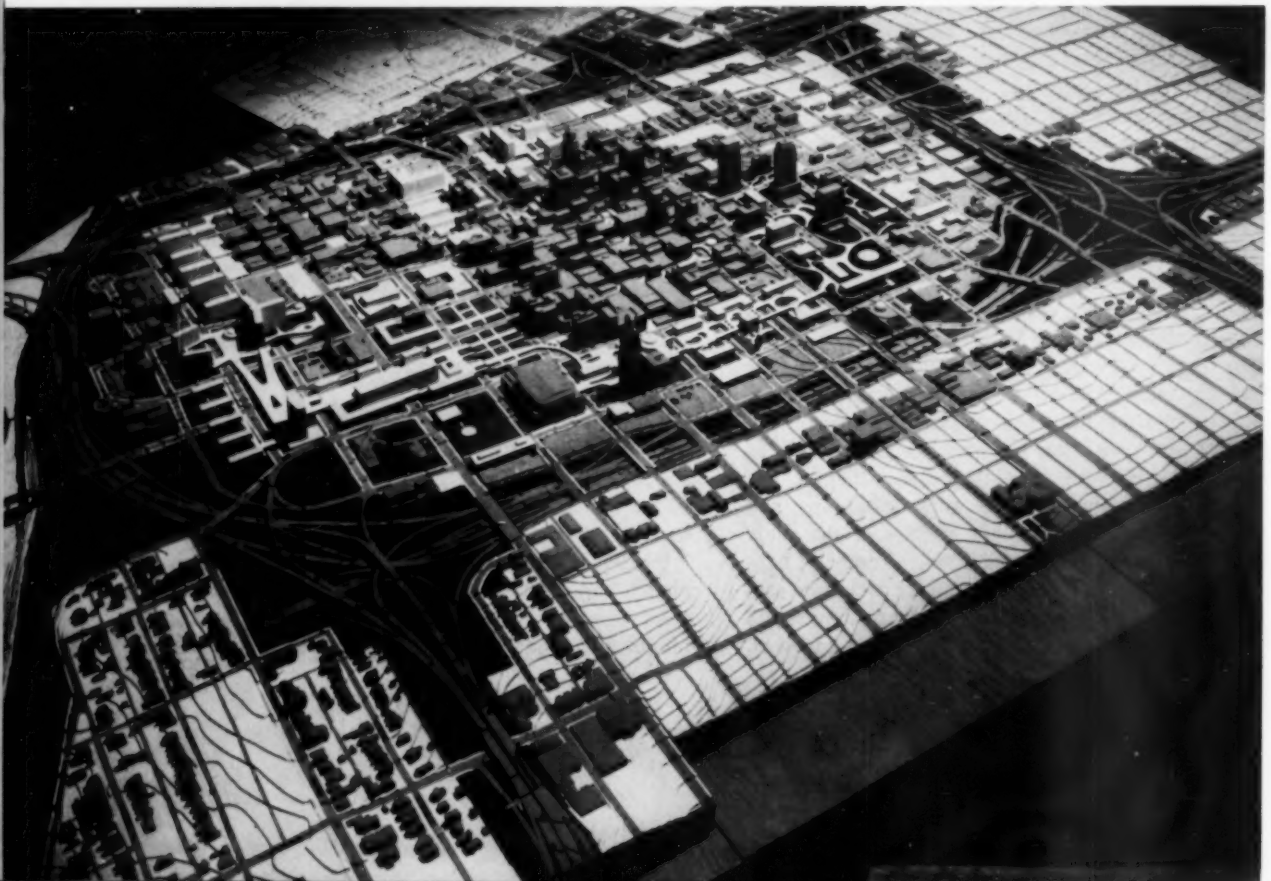


A view north on Walnut, the central north-south street of the Retail Area.



As Walnut Street could be. Of the twelve blocks of streets which the Chapter proposes changing in this manner, only fifty off-street car spaces are lost.

View of Central Business District model which was constructed by the City Plan Commission concurrently with the Chapter KC/80 study, and which incorporates the features of the study.



A view of the present Petticoat Lane, the major east-west street of the Retail Area. For its proposed appearance, see cover.

after which it was moved to City Hall for permanent display. With the exception of several viewings from representatives of surrounding cities and a luncheon meeting at which the Chapter explained the plan to leaders of Downtown interests, the biggest job of KC/80—that of really selling the idea to the public—is yet to come. Plans now are to place the exhibit once again before the public in November concurrently with the Central States Regional Convention for which Kansas City is the host.

Two important factors made the KC/80 study possible—money and a devoted group of architects. First, since the Chapter could not possibly finance such an undertaking, man-hours were backed by funds contributed by the City Plan Commission and the Downtown Committee of the Chamber of Commerce. Total cost of the combined Chapter KC/80 and City Plan Commission model projects was approximately \$18,000. This cost was split two-thirds by the City Plan Commission and one-third by the Downtown Committee. The portion required for KC/80 was approximately \$5500. In addition, nearly \$600 of Chapter cash funds were used.

Secondly, the personality makeup of the Chapter members themselves made KC/80 possible. The Kansas City Chapter has had a surprisingly small amount of internal friction during the past fifteen years. Most members are not only willing but anxious to participate in Chapter activities, and Chapter officers have never hesitated to delegate authority. A close liaison with the two architectural schools nearby (Kansas University and Kansas State) and their student AIA Chapters, brings an annual influx of young blood restoring vitality to the Chapter. Many members have been active on the City Plan Commission, the Zoning Board and the Park Board. And last, perhaps most important, the Chapter took a positive step and committed itself to do the KC/80 job—a stand from which there could be no backing down.

The Chapter effort has already accomplished a great deal of its aim. It was, after all, not intended to be a thorough study, but a "preliminary plan" illustrating the value and necessity of long-range planning and design. If, as a result of KC/80, the City realizes that the Downtown must have a definite and thorough plan for redevelopment, the Chapter would feel that its time was well placed and of real service to the entire community.



An Editorial from the *Kansas City Star*

Spontaneously, members of the Kansas City chapter of The American Institute of Architects have presented a plan to help redesign the insecure downtown district for modern times.

The architects, who anticipate being joined by their fellow professional craftsmen—engineers and city planners—in this splendid civic gesture, see a strong downtown district as vital to the future of Kansas City. A city without a core is a dying city, one of the sponsors of the proposition, Clarence Kivett, said.

Frank Slezak, president of the AIA chapter here, says the response within his organization is astonishing—his members have received the idea of free assistance to their city with amazing enthusiasm and unanimity.

It is no secret that Phillip Geissal, the city's chief planning engineer, is under-staffed and lacks funds to hire enough competent personnel or, indeed, to keep the key employees he now has.

To Geissal, the virtually unlimited, gratuitous service of the architectural and engineering professions of this city in designing for tomorrow is a great boon.

The architects have promised 3,000 man-hours of free time, but this is considered only a beginning. Both Slezak and Kivett believe the proposal should, and will, be a continuing service.

As a positive move to solve a growing municipal problem, the offer of the architects is an encouraging demonstration of aggressive spirit in Kansas City.

From the Executive Director's Desk:



Cameramen, Inc.

THE OTHER DAY my friend, the Commercial Minister from Great Britain to the United States, quizzed me about the impact, if any, of "think groups" in this country on our national policies. A "think group" being any representative aggregation which gathers itself together periodically for the purpose of formulating its policies which in turn it endeavors to have adopted, at least in principle, by the national government, accepted by the public, or both. While organization policies are not customarily inimical to the interest of the proponent group they perform are expressed in terms of advancement of the public weal.

Naturally, I countered with the question as to whether or not such groups existed in England and was informed that in his belief they did. They have groups which bear a rough resemblance to such organizations as our Committee on Economic Development, National Association of Manufacturers, U. S. Chamber of Commerce, and others, but apparently across the Atlantic they have not succeeded in recalling themselves so consistently to the public ear.

With us these organizations are generally those with which the average citizen does not immediately associate the word "think"—the exercise of that activity being popularly relegated (with an apprehensive shudder) by the citizens to the purveyors of esoteric literature and to those small gatherings whose participants are garbed in old tweed, regardless of sex. What with long and short hair so frequently misplaced there remains but the briar pipe

and the over-long cigarette holder to identify the sexes.

Inasmuch as my friend the Minister evidenced a certain unsureness as to the impact of organizations in his country on popular opinion and governmental policy, he seriously questioned whether or not such organizations had any discernible effect in this land. A good sound question in light of those two cherished American traditions closely, if not rhetorically, related—grass roots and cracker barrel.

What the British organizational counterparts may be, I do not know. Obviously, there are marked differences of definition of the British "think" group and the American "think" group, but for the purpose of argument, we assume that we could apply British connotations to American organizations, even if the ponderings of such gatherings as the Committee on Economic Development, U. S. Chamber of Commerce and the National Association of Manufacturers are not lightly come upon, but result from prodigious preparation and consume long and many hours of very serious conversation, sometimes labored, but never light. No offense to our British cousins but they do seem to arrive at decisions with comparative celerity.

The Minister found a marked difference of fundamental philosophy between the British approach to its political and national problems and our approach. The British, he felt, being somewhat older and more experienced politically, have now become inclined to do away with anticipation and meet problems head-on when, and only when, they

arise. We, on the other hand, tend to conjure up all implications and potentialities, cross our bridges before we come to them, and sometimes solve problems which turn out in the end to have been nonexistent or scarcely worth the effort—reminiscent of the old man who complained that he had lived a long, long time and had suffered no end of trouble, most of which never happened.

As The American Institute of Architects is in its way an American "think" group perhaps to a greater degree than the others, being a collection of 13,000 extreme individualists, each and every one of whom is fully competent to solve any problem, I felt that my discussion with the Minister was relevant to my role in the scheme of things.

First, in my opinion, our "think" groups do have an impact upon our country and the future. Possibly taking as a prototype the Committee on Economic Development, not by virtue of an impact of that body per se, but by reason of the fact that its gatherings call together leaders of business, of foundations, men of public spirit and good will, for the discussion of serious matters which concern our nation's future and that the days of discussions spent by these men will influence them individually and they in turn will act as the media for transmitting the group thinking back to their own industries, banking houses, foundations and other really vital pursuits.

Probably the impact of our own American Institute of Architects is a little more direct for, by virtue of our history, we have achieved an undeniable prestige which lends weight to any pronouncement emanating from us. It is not infrequently bruited about that the AIA says this or says that or has taken such and such a position. This of itself is a more cogent reason for our taking positions and sticking to them, come hell or high water. Let us hope that we may never fall into the way of compromise or arrive at decisions for reasons of expediency (the easy way out) for I know of no surer way for an organization to lose its effectiveness than by acquiring a reputation as an expert practitioner in the art of compromise. It is ironic that architects who are definitely not compromisers by nature or training are sometimes forced to accept that less than noble role in the pursuit of their vocations.

It is nice to enjoy the beliefs that one's policies and positions are correct. And they may well be, despite public opinion to the contrary. It is not current public opinion which resolves the rightness and wrongness of a position, but history. We are all still too young to evaluate current position. We can only explore, study, arrive at conclusions and with courage continue to support them.

The relations of the AIA to the United States government are direct. They take the form of presentation of our positions to the appropriate committees of the Congress, occasionally to the Congress at large via the age-old route, and continually to the Federal agencies. However, the latter presentations generally concern themselves with the resolving of complications that occur in administrative detail and operation.

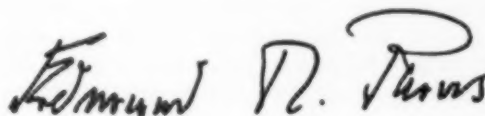
Democracy assumes or has forced on it a variety of forms. Ours, I think, while possibly not the most advanced, is certainly that best adapted for the immediate expression of popular thought. The British and some of the older countries apparently believe that they can sense the will of the people by the direct contact of public expression to the parliament. However, one is inclined to doubt the permanency of policies conceived in the atmosphere of the hustings.

It is very comforting to live in a democracy such as ours, even granted our trials, tribulations and frustrations, for we are afforded a greater ease of mind and living than is enjoyed by some two-thirds of the world's population who do not enjoy the advantages of democracy, the undeniable reason being that they are not yet equipped to achieve and operate a democracy. We can comfort ourselves with the thought that in living in and supporting a democracy we have achieved an intellectual level and a conception of thought that is not enjoyed throughout the world by the majority of people. Let us hope we are right.

The American system of government affords a ready access to authority and it is one which your organization utilizes to the full, even at the risk of incurring the wrath of some individuals. That occurred the other day when The American Institute of Architects came out in favor of a selection of the architect for the National Cultural Center by competition. This succeeded in having a disciple of a one and only architect vent his wrath upon the Institute for daring to assume that there is any other capable person than the "one and only" capable and fitted to design what may turn out to be the most significant monument of the decade.

So I believe that in reply to my friend, the Minister, it can be said that thinking organizations do have an effect on the ways of this country and among those organizations The American Institute of Architects enjoys a unique and powerful position.

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A review of the functions of the contemporary library in our urban areas

I LEAN ON GERTRUDE STEIN for my opening about libraries and their architecture. After considerable investigation, my definition of a library could do no better than to paraphrase hers of a rose.

Until some two years ago my knowledge of library philosophy—founded on my own infrequent need for a book I was unwilling to buy and an occasional call to the Reference Room for an answer not yielded by living room sources—was quite out of date. Then a speech led to a magazine article and that to your patient editor's suggestion that I, a lawyer, reflect for the *Journal* some thoughts about architecture and literacy. Very well, as observed long ago, "A cat may look at a king."

My concept of a library derived from such bits of historical record as that King Ozymandias (identified with the biblical Rameses II, 1300-1226 B.C.) had a library described as "the dispensary of the mind." Plutarch praised a First Century B.C. Roman general returned from the Mithradatic Wars under the spell of Greek and Oriental culture to found a library "always open and the walks and reading rooms about it free to all Greeks, whose delight it was to leave their other occupations and hasten hither as to the habitation of the muses." Boccaccio personified the precious manuscripts at the Abbey of Monte Cassino "as gentle prisoners held captive by barbarous jailers."

My concept of a library rested on visits to the Bodleian at Oxford, where there is a great collection of early editions of the Bible; or to the Sterling Memorial Library at Yale, where there are original manuscripts of Gertrude Stein, Eugene O'Neill, and Joseph Conrad; or to the British Museum, where one may see Magna Charta; or to Trinity College Library in Dublin, where rests the beautiful Book of Kells, out of its sanctuary only once to Edward VII at his hotel when he visited Dublin; or to the Library of Congress in Washington, where one feels escape from the cherry blossom tourists; or past the leonine guards, through the great portals, and up the high vaulted stairs to the Reading Room of the New York Public Library—a half acre of eight hundred studious places, each beneath a green shaded lamp, all occupied, and often a waiting line of learners; or into the library at the University of Virginia, where, when I was there some years ago, it was assumed that a visitor who asked for originals of Jefferson's correspondence could be trusted with the precious documents. (I read one in which he instructed his daughter at Monticello not to erect the new chicken coop until spring when he could return from the White House to locate them properly.)

If my readers have entertained the classical picture—carried in their patrician noses the musty aroma, suggested by my examples of libraries, I

Libraries in Glass Houses

LELAND HAZARD

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Mr. Hazard, an attorney and Vice President of the Pittsburgh Plate Glass Company is a frequent contributor to such magazines as The Atlantic and the Saturday Review.

In this article, written especially for the Journal, he brings out the great changes that have taken place in the philosophy of library management and design.

DECEMBER 1958

must shock them with a current, official librarian's anti-cultural declaration:

"However it must be understood from the outset that the modern public library is not a cultural institution in the narrow sense, containing only books on poetry and drama (sic), but is a source of information and ideas for the whole range of people's interests. It is as much a function of the library to provide books on home repair or starting a business as it is to provide the great classics."*

Perhaps my readers will be surprised to learn that the modern librarian considers every question important—to the questioner in any case. So it is that our public libraries guide their patrons—euphemistically called "readers"—to the nearest jurisdiction for sudden marriages; to a photostatic copy for the released criminal of the newspaper account of his rapacious offense; to a schedule for the tourist of the states where gasoline taxes are lower; to the best toaster, radio, washing machine; to instructions for giving a cocktail party (books on etiquette are invariably within arm's reach of the reference desk telephone); to a name for a new baby girl; to the answers to an endless number of pathetic, foolish, infuriating questions. To paraphrase from the play, "Harvey," in modern library philosophy, "No one ever takes anything unimportant into a library."

Most librarians draw the line if they know the question comes from a quiz show, and they will not knowingly do a high school student's homework. But they search their souls to discover the point at which they should decline further attention to the citizen's trivia and they assiduously avoid a qualitative rating of his demands on the library. If there is an answer, in prose or poem, in book, journal, index, or written source, they will fish it out for the questioner who, utterly uninformed of the laborious searching process, has faith in the library like that of a primitive in magic or of a countryman in palmistry at a county fair. One distinguished librarian in a large city said to me in defense of the library's egalitarian treatment of all comers, "No one is writing a book in this city."

PERHAPS MY READERS will not have noticed a change in type of librarian. No longer the bespectacled Miss Murphy exercising jealous custody over the precious books. Rather the librarian, in big cities at least, is likely to be a man who belongs to Rotary and gets around in the community. And he usually

will be flanked by a public relations officer, perhaps more than one, and other staff services with the usual duties of interpretation, promotion, and development. No longer the library of silent halls filled with a studious hush, rather a thoroughfare into which the citizens are enticed by many earnest blandishments—the mountain come to Mahomet.

Often the biblio-technic thoroughfares become overused. Then very gentle methods to reduce the traffic are employed. The New York Public Library dispenses folders actually designed to keep certain "readers" in their school libraries or in one of the 65 branches in Manhattan, but this is done under the guise of how to use *properly* the main reference library. On the face of the folders the lions *couchant* are caricatured into friendly, pleasant beasts—far from forbidding—looking not unlike Krazy Kat. (No architect today would permit lions at the portals of a library.) In one large city, where the library is physically connected to a museum of natural history, the youthful traffic sprawling over the library premises became intolerably disturbing to readers on technical questions in second-floor departments. The librarian placed signs at the foot of the marble steps reading "Study Rooms Above." That technique reduced the traffic. The youngsters avoided study rooms.

Ask almost any librarian where he would have his library, and he will pick the most expensive piece of downtown real estate or one hard by and say, "There!" Not, of course, because the location is the most expensive but because the traffic is the heaviest at that point. One handsome new library says of itself:

"It is planned in terms of open space rather than of separate rooms to which access is had by corridors. This is much the same principle as that used in department store layouts, for a large public library is essentially a department store of knowledge."

Another library in a southwestern city, located near a hotel with a world-famous name, proudly proclaims its ease of access to "busy people." I asked the librarian if he would as gladly serve a transient from the hotel as a citizen from the community, and he said, yes.

Most of the contemporary libraries have indeed taken down their walls. Vast areas of glass expose the interior to all and sundry who pass that way. Where the whole ground floor with its books and readers is not itself a street level display, separated from the pavements only by glass, there are window displays to intrigue the passerby with random intellectual provocations. I need not add that no modern library planner would interpose more than one

* The Pennsylvania Library Survey Report to the Governor's Commission on Public Library Development in Pennsylvania, August, 1958.

step between the temple of books and the potential readers who chance to enter. Never again must we have in America a Lincoln walking miles for a coveted volume.

The insistence of the librarian upon a location at the heart of the central city appears anomalous in view of the well-known flight from the central city into Suburbia—a flight not only of people but also of institutions, commercial and non-commercial. It is a well-known fact that research laboratories, whose scientists and families would certainly be among the more frequent users of books, are increasingly locating on the periphery of the city, not within its limits.

The movement to Suburbia has been on for some time. Spawned by the Federal Housing Administration and the Veterans Administration mortgage guarantees, the way prepared by bulldozing and other earth-moving equipment which could, and would, move the pyramids if the land were thought needed, housing units have been tumbled about the peripheries of our cities to fall where they would, like dice on a gaming table, miserably unplanned and architecturally unblest, bought by pathetic young people unwarned that a real estate development is not a community.

These suburban developments, extravaganzas in mediocrity, conformity and banality, are the first bitter fruits of non-planning by our cities. Not the least of the consequences is the drain from our cities of the economically and culturally competent citizens. Left are those who cannot flee the city—janitors, elevator operators, policemen, utility operators, minority groups, and of course some professionals who must be close to their places of work. The less affluent are left to supply the stimulus for the cities' cultural activities. Our middle-class people—stalwarts who need, and would support, cultural activities—are sitting in traffic jams trying to get into the city, where they try to work enough to justify a trip to get out of the city, where they try to live. And yet a location at the very heart of the city—on its most valuable piece of real estate—is the librarian's choice of library location.

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OF COURSE I know that many factors are involved. Is the library system county-wide or only city-wide? What is the policy about branches, bookmobiles, federation of city and county libraries, interchange, central indexing? But for a piece designed primarily for architects, eager to discover where their skills fit into the modern library program, I must pursue a little further the effort to define the library because in the end, as the existentialists would say, the library is what it does.

As we move to our conclusions we must split off the libraries of the institutions—universities, colleges, and special libraries of all types. They are generally scholarly. Their architecture, if any, is determined by institutional situations. They do not present to the architect the challenge of a library per se, that is, a community library.

I suspect that the library per se is becoming, perhaps has become, more a social agency than a scholarly institution. Lest this seem an indictment, let me explain. In our Western World in which the swamps have been drained, yellow fever and many plagues have been abolished, infant mortality has declined and longevity increased, knowledge of diet has grown, techniques of hygiene have improved—in such a world there are many more people. I need not quote the well-known statistics on population explosion.

We have a convergence of three factors in our Western World: (1) population explosion, (2) the Christian concept of the dignity of the individual, and (3) the Franco-Anglican-American dogma of the equality of men—and the library is the victim. We have the classless society. Everybody must know everything and if there is anybody who cannot learn everything, everybody must wait to see if by any chance that body can. Of course this is an exaggeration, but that is the way a point is made.

So it is that community libraries, marching hand in hand with our sprawling adult education movement, develop programs of study, instruction, and entertainment which range far and wide. One may listen to the three B's in special facilities, view from microfilm an ancient newspaper, see a special exhibit on the artifacts of his community, attend a lecture on James Joyce, see a play. Let me shorten the list by saying simply that it is at once long and diffuse.

Librarians protest that they do not duplicate the work of other social agencies and that their programs are always related to books. But what is not related to books?

What, therefore, have architects done with the community library? What should they do? Up to now they have designed facades which would do equally well for branch banks, research centers, department stores, insurance offices, any of a host of public and semi-public uses. But what else could architects do with buildings which are to be almost all things to almost all men?

Planes interrupting planes. This is the current mode unless a simple slab is employed. The mode is as good as any in a society which lacks a definable character to symbolize. A cartoonist for the *Cincinnati Enquirer* has caught the point very well and



Cartoon by L. D. Warren.
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The architects for the Parthenon could do their work because the structure was to perform only one function—house the Goddess. The aperture in the dome of the Pantheon was needed to let the gods in. Chartres reached for heaven because men believed their works would take them there. But our society believes only in itself and that is not enough for great architecture.

I make one affirmative suggestion for the central city library. Our cities are important. The central city must be saved from the blood-sucking peripheries. We should ceaselessly work to save the central city from the tangle of traffic and particularly from the lethal attacks upon the pedestrian by his natural enemy, the motorist. This we must do by quick, frequent, comfortable, cheap mass transportation.

I predict that our cities will come to more effective use of overhead crossings, exterior escalators, moving ramps and sidewalks, low-step buses invitingly open along the sides for easy entrance and exit, colorfully painted for an everyday holiday atmosphere. Escalators, moving ramps, and such facilities should be integrated with buildings so as to make more rather than fewer retail and business locations in the heart of the central city. At some places second-floor space will become more valuable. We can learn, as the Florentines and the Venetians

learned centuries ago on the Ponte Vecchio and on the Rialto, that good pedestrian ways make for good trade.

What is a city? It is the place where the best fruits of the best efforts of human beings are gathered—sometimes the result is a temple, a cathedral, a market, a museum, a forum, or a place of learning—something high, or noble, or beautiful; a place of dignity; the ultimate form of man's social integration. In the city the material and the spiritual fuse and the goodness of life multiplies. In the city also the evil of life may multiply. In the city good and evil come in conflict, competent disputation occurs, and knowledge of truth is gained. The city can be man's ablest work if man works at the city.

The library can take its place among the charms of the central city. It can be a factor in the effort to save the central city. But I bespeak for its architecture more reserve than is the current mode. Few Greeks entered the Parthenon. So also few Hebrews ever entered the holy of holies in Solomon's temple where the Art of the Covenant rested. The symbolism was more important than the reality. There are some signs of architectural realization that symbolism is significant. In Dallas, in an heroic sculpture the hands of God lift a youth and his book toward the sky. But the sculpture, unlike the great Buddha heads in the lofty walls of Angkor Vat, is applied to the facade and is obviously literal.

How will the ideal central city library look? How will it symbolize the book—the record by which man remembers his past and dreams of his future? Who knows? Who knew how Daphne would look? But I predict that some day some architect will bring it off and that when he does, the building will be less eager than the contemporary library structures, less ashamed of its intellectuality, more proud of its hidden recesses, not quite so pleadingly open to everyone, more happy to give sanctuary to those who would come from afar already knowing what treasures lie within.



BUTTE, MONTANA: A hill city of nondescript architectural design, where a builder put whatever came easiest on lots which had been laid out by a forgotten surveyor



CHATHAM VILLAGE, PITTSBURGH, PA.: The contrast of the planned community where Clarence S. Stein and Henry Wright served as site planners for Ingham and Boyd. A clear demonstration that the secret of successful design lies in the intelligent handling of space and masses.

HAS ZONING become a strait jacket?

What has zoning accomplished for our cities?

What is likely to be the next step in zoning?

If we could put into effect zoning regulations intended to improve community design, could we be confident that they might not produce more harm than good?

What principles can be agreed upon and what sort of expression can be given to them, which, if enacted into legislation would, on the one hand, act as a restraint upon community chaos and ugliness and yet offer incentives to the type of community growth that is expressive of harmonious intercourse within the community?

These are questions that faced the members of the Joint Committee responsible for framing the report on "Planning and Community Appearance," which was presented at the Cleveland Convention of the AIA last July and which had been received by the AIP the preceding month.

Because of the extended discussion of the plans for the East Front of the U. S. Capitol, the opportunity to discuss the Joint Report on "Planning and Community Appearance" on the floor at the Convention had to be postponed. The report is receiv-

ing notice in the architectural press and the invitation to use the columns of the *Journal* of the AIA to develop progressive ideas through written discussion is the next best thing to the exchange of ideas face to face.

The report marks but the beginning of an approach to a subject of burning importance to architects. As de Tocqueville said over a hundred years ago, America being a democratic country, the citizens are accustomed to regulating their affairs by group action. When need arises a committee is formed or a law is passed. Once the public becomes indignant about the shoddiness of city growth, the profession of architecture faces the likelihood of a crop of restrictive legislation that might place the profession in a strait jacket. Hence the present investigation by the Joint Committee representing the AIA and the AIP.

Progressive Architecture was the first to take notice of the Joint Report with a book review, to which Mr. McGruder affixed his initials. Apparently after fingering through the report and noting that it summarized the progress of legislative effort and court decisions affecting community appearance, Mr. McGruder assumed that a group of high minded

Planning and Community Appearance

The New York Chapter of The American Institute of Architects and the New York Regional Chapter of the American Institute of Planners appointed a Joint Committee on Design Control to study governmental influences on community appearance. Out of their studies, and with the cooperation of the Regional Plan Association, came the book "Planning and Community Appearance," with Henry Fagin and Robert C. Weinberg as Editors.

We present a report on the book, prepared by a member of the Joint Committee,

ARTHUR C. HOLDEN, FAIA, AIP

"ivory tower" artists had set themselves up as competent to think up a law that might make civic beauty compulsory. Had the reviewer been able to sit in on some of the meetings of the Joint Committee, he would have seen that nothing was further from their purpose. Good as the report is, it is not possible within the scope of any report to depict ideas in a state of flux and germination. Nevertheless, this report does set down much that has been attempted through legal restraint, successful and unsuccessful, good and bad.

Epoch Making Decision of US Supreme Court

THE REPORT makes clear that law may now be used as a defense against a visual nuisance. That in itself is a gain even though it represents a negative rather than a constructive approach to the difficulties which face most thickly settled communities today, rural and suburban as well as metropolitan.

The United States Supreme Court has, in its decision, (*Berman vs. Parker*, 1954—348, U. S. 26), affirmed that the community has the right to control its appearance and prevent disfigurement.

Offenses which produce a nuisance to the eye, however, require a sense of judgment. The public

has long been protected from offenses against the sense of smell and hearing. It is still not possible to write a law which prohibits ugliness or a law which requires beauty.

Boards of Architectural Review

THE LAW, which seeks to prohibit offenses against the sense of sight, must stipulate how esthetic judgments are to be formed in the interest of the community. Though methods differ, the trend is to place reliance on "Boards of Architectural Review." When a reasonable proportion of professionally trained men are placed upon a Board of Review, there is hope that discerning judgment may be exercised. No Board, however, no matter how competent, can act without a background or framework established to guide public policy. It must be remembered that we are only at the beginning of initiating procedures that have been made necessary in the change in scale of modern life.

Edmund N. Bacon, Executive Director of the Philadelphia City Planning Commission, who reviews the Joint Report for the *Architectural Record*, takes issue with the reliance that can or should be placed upon Boards of Architectural Review. He well

points out that appearance as expressed in a "community design plan" has no more right to separate existence than would a design plan in a building district and separate from its circulation plan, functional plan, or structural plan.

With this exception Mr. Bacon seems to feel that the Joint Committee faced up squarely to a problem which is central to American life. He says: "The book is a clear identification of the nature of the problem. The description of community appearance in terms of geometric patterns, linear features, landmarks, lookout places and areas of distinctive character is an advance over the kind of thinking on this subject up to now."

Change in Scale

WE WHO ARE CONCERNED about the future of our cities have to deal with a phenomenal population increase in a mechanized age. This means that the handling of crowds has become a new type of problem. Huge buildings, those that extend over vast areas horizontally as well as those which rise to great heights vertically, have created special problems of approach and servicing. The old-fashioned city street and the old-fashioned country road, even the improved post roads and highways of the last generation, are recognized today as outmoded. City streets without parking bays or estuaries become clogged and useless. The increase in long distance vehicular traffic has forced the development of the new, high speed limited access thruways; but without the local feeder roads and slow speed and limited use roads, the new thruways would be unthinkable.

The factors that previously controlled growth and kept it within human scale appear to be no longer operative. It is for this reason that chaotic growth which is too frequently makeshift, tends to create new problems and throws existing facilities out of scale, and so produces upon the sensitive eye a sense of esthetic discord. Take for example the American skyscraper; at the outset it was found to possess great advantages for office use, and latterly for certain types of residential use. It was the early abuse of land by overcrowding with skyscrapers that necessary the control through zoning legislation.

While the worst abuses of congestion, those that were recognized as affecting health and safety, were checked by early zoning regulations which were written to control the development of individual lots, we now realize that far more is necessary if we seek something more constructive than the mere prevention of nuisances. Now that it has become established by the Supreme Court decision that a community may by legislation control its own appearance, it behooves our civic leaders and architects,

engineers, and planners, who are responsible for design, to find out not only what sort of controls are to be exercised, but, more important still, at what points these can be applied effectively. We have got to master the forces that create conditions producing the appearance of chaos. We can't just legislate chaos out of existence, any more than we can by legislation compel communities to appear beautiful which have mistakes of growth that become manifest in inconvenience, depreciation or through ugliness.

Relation of Beauty and Economics

WE MUST RECOGNIZE that economics and beauty are tied together with a relationship which, if neglected or misunderstood, will work havoc to the disadvantage of the citizens for whose happiness and use communities are designed.

The *Architectural Forum* in commenting upon the Joint Report in its August 1958 issue, very aptly points out that a good plan may seek to create the new type of "special zone" to control commanding sites that are recognized as important factors in community design, but, unless means can be provided for "making it stick," a good plan may be little more than an educational or academic exercise. The *Forum* also stresses that part of the Joint Report that was passed over by *Progressive Architecture*, namely, that at last, through legislation in New York State, the way has been cleared for coordinating the taxing power with the end sought by zoning. How, pray, may a site, important to a good community plan, be reserved for a desired time of development or how can even a desirable development already achieved be preserved, if taxing authorities level assessments on the basis of the mere market exploitation of the particular site?

Witness the case of Washington Square in New York City, where an attempt was made to preserve the original beauty of the low buildings on the north side of the Square. Public policy sought to invoke zoning to limit heights of buildings abutting all public parks. The proposed limitation, although put forward by the City Planning Commission, was repudiated because all properties facing on squares had been given higher assessments than adjoining properties for the reason that these were considered more desirable from the point of view of market value. The New York Constitution requires assessments to be based upon fair sale value. To recoup, owners of property facing on parks claimed they must have the right to sell for a use producing a higher return.

Again, it is important to realize that even the most desirable forms of legislation do not solve the problem. Although it is now possible for tax as-



FARMINGTON, CONN.:

A village community where respect for scale and appreciation of the amenities led one neighbor to appreciate the precious possession given by those who understood community values.

sensors to respect agreements to set aside certain sites for particular types of development which may limit market value, it doesn't mean the way has been found to determine how needed agreements may be worked out, or made equitable and effective.

Individual Properties a Part of the Community

THE BIG POINT is that we are beginning to recognize that we must plan for larger units than isolated individual buildings on lots between legally set boundaries. Adjacent properties have an effect one upon another, and that property is most useful, most valuable, and in reality most esthetically satisfying which is harmoniously and advantageously related to the community in which it is situated. In this direction, small suburban communities have made real progress. The city of Rye, N. Y., is an example of a well administered Board of Architectural Review.

European experience also holds significance as to the direction which municipal policy may be able to take, reinforced as it now is with the American decision of *Berman vs. Parker*. Paris has established three separate types of Zones of Protection where the designs for individual properties must be subordinated to the requirements of the larger neighborhood: (1) Proposed changes involving sites of picturesque, monumental, historic, archaeological, and esthetic character, "must have the approval of the Commission on Sites." (2) Similar controls are set up to "protect recognized vistas" and prevent interference with visual aspect, and, I should like to add, to maintain the "visual understandability" of the community. (3) Certain residential zones may be made subject to controls of a public or private character in the interest of "coherent design."

In the United States, we also have older precedents. In 1921 a special commission was given control over the Vieux Carré in New Orleans both

as to preservation of existing "buildings having architectural and historic worth" and discretion over permits for new work within the quarter. Special historic districts were created in Alexandria, Va., in 1940; Annapolis, Md., in 1952; Williamsburgh, Va., in 1947; and Old Georgetown, Washington, D. C.

How Adjust Private Property Rights

HOW OFTEN in the past have plans, made with the purpose of giving direction to community design, seemed to be set at naught by the erection of one or more buildings on particular lots, the owners of which appeared to be either ignorant of the advantages to be derived from the execution of the plan, or actuated by the belief that unless they realized such advantages as immediately seemed possible from their properties they would lose such advantages forever. Perhaps it is an acknowledged fault of planners, that most plans designed to improve the physical form of the community do not seem to take into consideration the managerial and operational problems created during the transitional period before the projected plan can become a physical actuality. The advantages of far-sighted plans are often lost because there is no economic plan for the acquisition of property needed for public use on the one hand, and on the other no means for compensating or even for aiding those owners of private property who are asked to forego immediate advantages in the long range conformity to the group interest.

Unfortunately valuation for the taking of private property under eminent domain proceedings has been too closely linked, under the law in most American states, to the idea of a market value for one particular parcel of property, rather than to the compensation of the owner for such limitations or deprivations in the use of his property as may be imposed in the public interest. As is noted in the Joint Report, incentives to good planning and to conformity to desirable plans that may be made have been inadequate under our existing zoning ordinances which have, up to the present time, depended too greatly upon a negative type of prohibition.

The recent amendment to New York state law permitting local authorities to utilize variations in the tax rate, on assessments where special zones are created to preserve sites or buildings that have been found to be of esthetic or historical value to the community, is an important step in advance. As yet, the power is untested in the courts, and it will need to be developed and extended in order to be made applicable to the protection and execution of proposals for community and city planning.

It cannot be said that the public has the



EXPANSION IN THE WEST:

Where the speed of modern development outweighs consideration of quality and beauty. Usually zoning legislation only adds to the dreariness by exacting uniformity of standard setbacks. In this case a variation in scale might have helped; perhaps an occasional apartment tower protected by adequate space; perhaps a relief through group row dwellings similar to Chatham Village.

slightest inkling of the significance of the long range advantages that may be involved. To give but one obvious example, it is well known that golf links are expensive to maintain and that many beautiful tracts of rolling landscape once occupied by golf links or park-like estates have been swallowed up within the expanding metropolitan gridiron of streets, because taxes thereon rose beyond the range of any possible payment to be derived from the use of open space. To preserve esthetic values, power is now given to municipalities to vary the impact of taxes upon real property.

This will require political courage and financial imagination, as well as imagination in the field of physical planning. Combined imaginative action will be needed to work out a program that will postpone premature development of the wrong kind, secure a share of the esthetic advantage permanently to the public, and encourage well timed and well designed development for such portions of our threatened golf links as can be preserved for changing uses to be enjoyed both by the public and by private owners. Substitute for the words "golf links" the words "any natural or existing advantage" and you have the real challenge that is being made to architects and planners for imaginative leadership.

How to work out coordinated programs for public and private development and redevelopment is perhaps the most challenging of all the problems confronting our municipalities today.

Evolving Legal Concepts

CHAPTER IV, *Evolving Legal Concepts*, has been contributed in its entirety by Albert S. Bard, counsel for the Joint Committee. It takes the sane view that while it is not possible to compel beauty by legislation, it was inevitable that the step by step development of the rights of citizens to be protected by law should be extended to include protection from offenses against the sense of sight. Mr. Bard traces the slow evolution of legal procedure, and uses the all too evident billboard problem as an example of recognition by the courts, at a date as early as 1935 in Massachusetts, of the public demand for protection against community disfigurement.

In comment to be published in the *AIP Journal*, Carl Feiss has cautioned against what might become a stylistic imperialism since the judgment of even trained technicians and estheticians can be fallacious. He points out that the intimate interest of the people of a community . . . must psychologically be a part of planning. People in general are interested in the appearance of their automobile, their home and their own front lawn and here their judgment has been developed. The question remains how to develop interest in and judgment of an effective participation of the people in the appearance of the community as a whole.

In addition to the valuable data on legislative controls, the Joint Report, Chapter II, gives a



NAPOLÉON'S COLUMN IN THE PLACE VENDÔME:
Here a monument gives direction to thought and motion. In American cities monuments have been dwarfed by the vertical growth of buildings. One of the problems today is how many small parks and squares be preserved and still have justice done to property owners by a restriction prohibiting high buildings fronting on the park.

thought-provoking analysis of the basic requirements of good municipal design toward the achievement of which the efforts of architects and planners should seek to enlist the talents of lawyers, financiers, public officials, and above all the general public.

Postscript — What of It?

WITHOUT BELITTLING the importance of an able report or the practicability of well-intended controls through law, the writer, who took part in the work of the Joint Committee and who believes that the report should be owned and studied by all members of the profession, desires to point out that the profession can perform its greatest service in a field where no legislative assistance is required.

Legislative controls always carry with them the danger of stultification. Imagination is not stimulated by putting all designers in a strait jacket because some designers are either incompetent or unscrupulous and seem to prostitute their art. What is needed is greater ability on the part of the public to differentiate between good and bad design, or between design and no design at all.

There is no tonic so healthy as an enlightening discussion in which the public can be interested. Yet we architects, through our own narrow-mindedness and ignorance, have even written into our canons of professional ethics the dictum that no architect shall publicly criticize the work of a brother architect. When architects get together, they are careful in their comments about the achievements or

shortcomings of design or about work that has been completed. It is perhaps nearer the truth to say that architects have not consciously tried to develop the art of analytical and constructive criticism. As cultivated men, architects must realize what literary criticism has done for the profession of writing and what dramatic and musical criticism has done for the performing arts. Are we not to talk about the growth of our city, or to seek out what is good or bad about the forces of growth? Indeed until we learn to talk about and understand the factors which control growth, how can architects develop a sympathetic public who will expect and insist upon and get great things instead of makeshifts? Are we not all vitally interested in the character of buildings and those combinations of buildings, roads, and open spaces which make up our neighborhoods?

We architects need systematically and consciously to develop the art of self criticism. We need to arouse public interest to the comprehension of what architectural criticism can mean toward giving a better direction to both urban and suburban growth. Awakened public understanding and an awareness that we are capable of infinitely better facilities for urban living will do more to advance the arts of civic design than statute books full of regulatory ordinances. The more discussion about the problems of design the better. Until architects themselves become more analytic and constructively critical of their own work, the public will continue to lag behind in appreciation.

The creation of Boards of Architectural Review, which may be called into being in order to determine whether esthetic standards have been violated or not, may be found to be doubly useful if they serve to stimulate interest in the technique of design on the part of the public. The Chapter meetings of the AIA should furnish opportunity for the development of architectural criticism. Perhaps even the somnolent College of Fellows might enliven some of its annual convocations by bringing to the forefront an analysis of some of the problems of design that have been faced by the community in which they are meeting, and drawing from some of the Fellows, who have been honored for excellence in design, their comments upon ways and means for benefiting from the experience of others.

RICH'S DEPARTMENT STORE
KNOXVILLE, TENNESSEE

ENTRANCE TO RICH'S DEPARTMENT STORE AT NIGHT
KNOXVILLE, TENNESSEE



FAVORITE FEATURE

PRESTON S. STEVENS, FAIA
Stevens and Wilkinson, Architects, Atlanta

DECEMBER 1958



GEORGIA BAPTIST HOSPITAL
ATLANTA, GEORGIA



GEORGIA BAPTIST
PROFESSIONAL BUILDING
ATLANTA, GEORGIA



S OF RECENTLY ELECTED FELLOWS

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Georgia

Some Thoughts on Esthetic Research

ALBERT FREY, FAIA

IT IS WITH MUCH INTEREST that I have read the report of the discussions and proposals at the 1958 Convention on "New Fields of Architectural Research" in the August issue of the *Journal*. The time seems particularly propitious for directing renewed attention to esthetic deliberation. There is an increasing awareness by the public of the aspects of things around us and, however misguided some tastes may be, we witness the rapid style-obsolescence of cars and appliances, and the growing popularity of amateur photography.

To develop a philosophy of design requires periods of contemplation, uninterrupted by the problems and distractions of the daily working routine. While the practitioner with advancing age and experience also accumulates knowledge of esthetic precepts, growing obligations toward office and home often prevent him from taking the needed time to conclude a theory. I have been fortunate in recent years to be able to leave for a month or two in summer on a trip or vacation. The days of 100 to 120 degree temperatures from July to September in my home town of Palm Springs are an added incentive for the change. In the Hawaiian Islands, which I have visited several times, I have found a climate conducive to relaxed meditation, with the moist air and luxuriant vegetation a desirable contrast to the dryness of the desert.

Three years ago, on a trip around the world, I became aware of the possibilities which the land, people and architecture, from Cairo to Tokyo, contain for one grown up and educated in the Western World. We have barely begun to comprehend the esthetic potentials of the cultures on that side of the globe.

Various outside influences have at intervals in the past, been a boon to progress in creative design. Liberation from eclectic styling was accelerated during the nineteen-thirties by the business depression, which gave architects time for deliberation. Similarly, in World War II, a brave new architecture was born in the minds of designers, which the frustrated building industry promoted in alluring advertisements. Typical examples of this creativity were the designs published by the *Architectural Forum* in the issue of the House of 194x. These projects by inspired architects of the period have stimulated new concepts in domestic work since the war.

Form-creative ideas come from many sources. While evolution in construction techniques is widely publicised and discussed, there is little exchange of thoughts and findings on esthetics. Basic principles of eye appeal should be established, to differentiate true architecture from plain building, stylistic features or faddish gimmicks. Every designer now has to search by himself and develop a vocabulary of symbolic shapes and spaces. He cannot conceivably discover as wide a range of possibilities during his lifetime, as he could with the coordinated effort of the profession. What do we know about the psychological connotations of solids and voids, and our emotional responses to their infinite configurations? How do we achieve monumentality or intimacy, or what are the desirable rapports between tectonics and nature?

Our total environment should be reconsidered esthetically. In my opinion, architects have the broadest knowledge of its many aspects and should be the design coordinators for all specialized fields of planning and engineering, manufacturing and construction. Architectural beauty is not skin-deep, it is inherent in structure, bound to material, inspiring during construction, magnificent at completion, and dignified in age. This integration of design should include the accessories of city, suburbia, and countryside. There are the continual offenders, such as telephone and power poles. Why could not the disconcerting array of masts and wires be organized as they were for centuries in the harmoniously arranged riggings of sailing ships? Perhaps an improvement will evolve from the lacy steel towers which support high tension power lines, or from precast concrete poles disposed in orderly fashion, that we find in countries where wood is precious. We know that beauty is not incompatible with utility, but neither does it automatically follow function. In the Chateau of Chambord the numerous fireplace chimneys were turned into an artistic feature of the roof design, and more recently Eero Saarinen used rows of metal pipe stacks in his architectural composition of the General Motors Research Center.

Successful cooperation between architect and manufacturer for the establishment of new design standards has been amply demonstrated. In the early thirties, George Howe and William Lescaze developed flush metal office partitions with the

Hauserman Company for the Philadelphia Savings Fund Society Building. For the home of Manhattan's Museum of Modern Art, Philip Goodwin and Edward Stone pioneered a metal and glass curtain wall, while the just-completed Seagram tower incorporates new standards of door hardware designed by Mies van der Rohe and Philip Johnson.

In the totality of the environmental spectacle, the full range of form expression should be brought into play. To limit the language of architecture to rectangular compositions, can be as fatiguing to the eye of the inhabitant, as a continuous straight-away of road is to the motorist. Traffic engineers have learned to relieve the monotony of gridiron patterns with sinuous sections. We have to rediscover composing with a variety of shapes and spaces. The recent revival of curved, domed, warped or folded roof lines, is quite possibly a consequence of our dissatisfaction with a preponderantly prismatic architecture over several decades, rather than a result of structural inventions. We have available a great diversity of materials and construction systems and know from practical experience that there are usually several design solutions of similar functional and economical attributes. In lieu of pursuing stylistic periods with limited formulation, followed by extremes of reversal in mode, we could produce a continuing and fully instrumented symphony of architecture.

There is urgency today that we re-appraise esthetic essentials of living and surrounding. We too often neglect the aspects of nature to which our emotional responses were conditioned by countless human generations. Our own creations are an extension of natural processes and the qualities of synthetic structures should be coordinated with the assets of the indigenous setting. To live in harmony with our buildings is not necessarily dependent on what we call a high standard of living. If we understand the esthetic potentialities and the practical limitations of the methods at hand, the happy life can be achieved by a variety of means. Taos Pueblo in New Mexico, traversed by a clear stream, was made an environment of beauty by the native Indians. Their habitations are technically less advanced than many tenements of our younger civilization which have aged into slums. While the local materials of primitive building are innate to the site, the forms and textures of man-made products at first seem strange. Although they are subject to universal principles, their affinity to nature and their esthetic possibilities have to be resolved. Superficial stimulation from the colors and formations on our planet, from old or new architecture, engineering feats or technological marvels, can serve as a catalyst for novel combinations, but creative architectural design must be based on a deeper understanding of esthetic precepts.



Sanford W. Goin, FAIA

A Tribute

by President John N. Richards, FAIA

IN THE TRAGIC DEATH OF Sanford W. Goin, The American Institute of Architects has lost an able and devoted board member. His colleagues have lost a dear friend.

We will remember Sanford as a man of great warmth and kindness. His friendliness, thoughtfulness, cheerfulness and unfailing good humor were some of the characteristics that contributed to his wide popularity.

For many years he rendered devoted service to the Institute and to his fellow men in his Chapter, his state organization, his region and finally, as a member of the Board of Directors. He selflessly worked for the advancement of our profession. In all of these efforts he was loyally supported by his beloved wife, Elisabeth.

Sanford ably and conscientiously represented his region. But always he kept uppermost in his mind the best interests of the entire Institute, and gave tirelessly of himself to better his organization.

He will be missed by his many friends, both in and out of the architectural profession.

On behalf of The American Institute of Architects, I should like to take this opportunity to express our deepest sympathy to his devoted wife and family, and to the members of his firm.



ENTRANCE ELEVATION FROM THE NORTH SHOWING REFLECTING POOL

A New Palace in the Piedmont

THOMAS K. FITZPATRICK, FAIA

As its first venture into originally written architectural criticism, the Journal presents this critique of the elegant new home office of the Reynolds Metals Company in Richmond, Virginia. Skidmore, Owings and Merrill were the architects of the building; the critic is the Dean of the School of Architecture at the University of Virginia.

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ON A ROLLING VIRGINIA COUNTRYSIDE seven miles northwest of the center of Richmond, on the threshold of the Piedmont plateau, stands a stately and handsome building housing the general offices of the Reynolds Metals Company. Completed in September of this year it represents the high level of achievement which can be realized in a building program when a progressive corporate client provides the creative architect with the authority and resources to fulfill in every detail the total design concept of the building and its environment. The challenge to the architect is a powerful one and his burden of responsibility is enormous.

This particular project follows the example set in recent years in the design of autonomous general

office facilities of selecting a site beyond the limits of a metropolitan center where the comparatively low cost of land allows the opportunity for large and generous site planning as well as magnificent landscaping which is virtually impossible in the center of a city. There is also the possibility in this approach of a wider choice of exterior surface materials since the building in its country environment is not subjected to the smoke and dirt of the city nor must it withstand the constant buffeting of the undisciplined urban floatsam of man and machine. Thus it may stand as a bright and shining thing, enriched and softened by the gifts of nature under man's control, in broad green terraces, stately trees and reflecting pools of water. It no longer must compete

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for identity and position, for sunlight and space in the vast anonymity of the urban scene. For this reason alone the challenge to the creative architect is magnified.

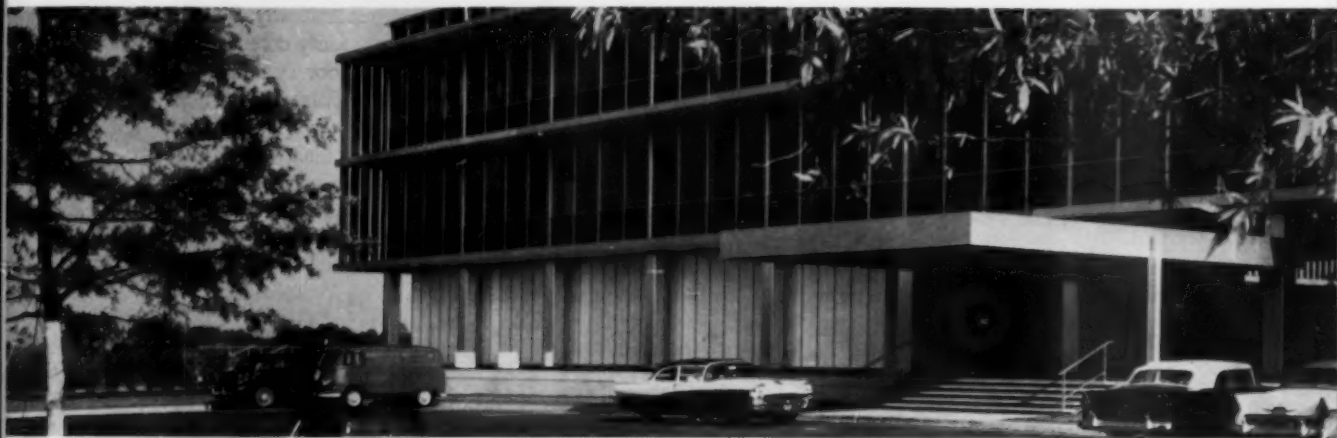
The basic problem in the Reynolds building was to provide appropriate space for the approximately one thousand personnel of the company including space for executives and the divisions of sales, purchasing, advertising, engineering, marketing, fiscal and service. There is no public transportation to the building and food service was to be provided for all personnel. The initial site covers thirty-eight acres and this has been increased by a recent purchase of one hundred and twenty-one acres on the north. Vehicular traffic approaches the location on a four-lane highway which is the main route west to the Blue Ridge Mountains. Entering the grounds from the east one is immediately aware of the rigidly classic positioning of the building on axis facing north. Two equal parking areas providing total space for four hundred and fifty cars range on either side of the long rectangular reflecting pool. The reflecting pool, added during the design stage, functions as a holding basin for irrigation water piped underground throughout the grounds. Broad avenues lined with water oaks parallel the pool and allow immediate vehicular approach to the entrance proper. However, approaching the building normally from either parking lot one loses to a degree the total impact of the rather majestic siting of the building and misses the rich dramatic experience of walking up the avenue approach with the sparkling quality of the facade constantly highlighted on the surface of the water. It is unfortunate perhaps that the cluster of cars must encroach so near the building itself and because of this discourage the use of the central approach which is so stimulating emotionally. The climate of the Piedmont is seldom so severe as to make the longer walk unpleasant.

As a first impression one immediately reacts favorably to the satisfying simplicity of the design organization. The broad brick paved surface of the podium carefully related in its subdivisions to the articulation of the first floor columns is rich in color and texture and provides a handsome and appropriate transition from the natural green slopes to the precise regularity of the building statement. The exterior supporting columns of the ground floor sheathed in aluminum form a stately peristyle surrounding the building and express quite honestly and with a certain elegance the basic trabeated structural system. The structural framing of the upper floors and roof consists of clear-span trusses supported by the window mullions on a modular spacing of 5'-2". Floor panels welded to the top chord of the trusses

form a rigid diaphragm stabilized laterally by the conventional structure of the four utility cores at the corners of the inner court. The floor system finds expression on the facade as a flat anodized aluminum panel (ultimately painted black) interrupted by the rhythmic regularity of the slender mullions. The total impression is one of handsome proportion and where aluminum sheathing has been used great discrimination and reserve has been exercised. Of some interest is the fact that where this surface material occurs it takes on by reflection a sort of protective coloration from its surroundings which through variety softens and improves the visual effect. Perhaps the only disturbing note in the main facade is the profile edge one sees of the vertical louvers which protect the upper floors from the east and west sun. Instinctively one wishes that this treatment might have "turned the corner" even at the risk of possible compromise. Environmental control of this sort surely need not be quite so arbitrary.

Moving through the entrance porch the precise studied quality of the interior court captures the same sense of elegance so apparent on the exterior. A stately mature magnolia, a cluster of holly, a simple rectangular pool, arrange themselves in carefully contrived positions within the framework of the modular subdivisions. Clipped grass plots complete the rectilinear order. Jets of water spring up rather modestly from the center of the pool and the result is a timid flickering force, which, had it been robust would have provided a magnificent character for the generous courtyard. It badly needs a stronger statement in a true visible basin which conceivably might provide that slight touch of vulgarity needed to add vigor and spice to the all too regular composition.

The clear vista provided by the loggia on the east side of the court frames a fine broad view of the surrounding countryside and emphasizes again the generous scale and treatment of the platform. The most dominant visual element of the building from the court is the powerful motif of the vertical louvers covering the upper two floors on the east and west. Each flat diamond-shaped unit is fourteen feet tall, approximately twenty inches wide, fabricated of aluminum anodized gray on the south face and painted blue on the north face. The system of louvers is motor operated and their rotation is timed to be slightly in advance of the movement of the sun. The blue face of the louvers turns inward to control the heat and glare of the sun and one must assume that the color was selected to create a desirable psychological effect of coolness during the hot summer. Unfortunately the blue is uncompromisingly harsh and captures no sense of subtlety



NORTH ELEVATION AT ENTRANCE



AERIAL VIEW FROM THE NORTH WEST



VIEW FROM THE LOBBY ACROSS THE COURT TO THE EAST LOGGIA

nor does it complement in any manner the soft tones of the foliage in the court nor the warm earth color of the platform. Only the slightest touch of cerulean blue used either rhythmically or without variation might have improved the color sense and as well retained the quality of coolness.

The lobby is approached through the main entrance on the right side of the north porch and again the emphasis of the warm brick platform carries into the entire area. The lobby is at once a display gallery, a lounge and an information center. Handsomely appointed, generous to a fault, it becomes immediately a part of the courtyard and retains the vista beyond. The brick floor continuing inward from the court seems entirely logical and appropriate. One instinctively wishes the ceiling were not quite so busy and that the ponderous cross of the moving stairway was somewhat less obvious. It could have been more handsome viewed in a somewhat translucent manner through a decorative grille used as a screen at the column points. The information and control desk both in design and position appears to be almost an afterthought.

With the exception of the space allocated to the personnel department the entire first floor is devoted to executive office suites including appropriate dining rooms and the necessary service. The various space subdivisions create an atmosphere of unhurried informality without losing the quality of elegance which pervades the entire building. This is retained as a constant design effort which is carried out in every detail from the door knobs to the exquisitely detailed filing cabinets. The individual paintings which were selected with great discrimination lend a character to the area not unlike that which one might expect to encounter in a fine private gallery. Arranged with great care and for specific visual effects the collection of modern paintings

softens and enriches what might have been only a properly dignified environment. Added to this is the pleasant discovery of colorful and exuberant terrace pools and planting visible from all the offices and framed here and there by drapes full of rich and exciting color and texture. In the executive dining room, however, the scene becomes one of startling severity, monastic in a way that somehow creates the impression that the luncheon period is the most compelling and serious task of the day.

The second and third floors are quite identical both in character and space organization. Because of the clear-span construction, the absence of visible interior columns and the comparative lightness of the mullion supports in the exterior and court walls, great flexibility and freedom in space handling is reflected throughout the area. The clutter of corridors is eliminated and the pleasant vistas which open up to the outside and to the courtyard expand and multiply the actual space and make one increasingly conscious of the immense value of the open country setting. Again the atmosphere is one of unhurried relaxed informality. Where a sense of privacy is desirable for the office personnel it is accomplished by low screen divisions or banks of filing cabinets which do not impair the sense of openness. Where private offices occur the use of translucent walls reduces considerably the effect of solidity. The sense of lightness is accentuated by the total effect of the completely luminous ceiling constructed of aluminum honeycomb diffusing panels. At first several of the personnel objected to the sense of extreme brightness but apparently soon adjusted to this environment which is quite unlike the normal cellular office space.

The overall background is gray and white and color is limited principally to the use of primary hues of orange, blue and yellow on the division

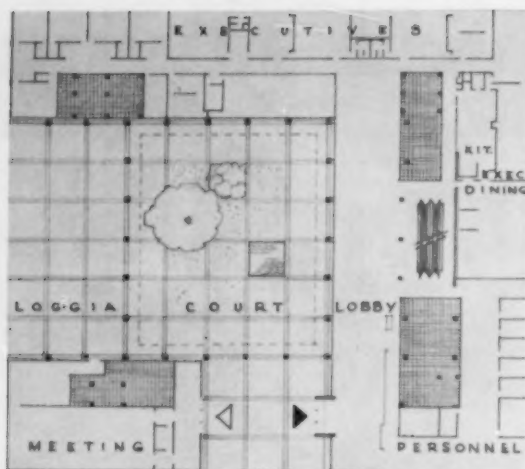


VIEW FROM THE COURT INTO THE LOBBY SHOWING THE POSITION OF THE MOVING STAIRCASE AND THE LOUVERS ON THE SECOND AND THIRD FLOORS.

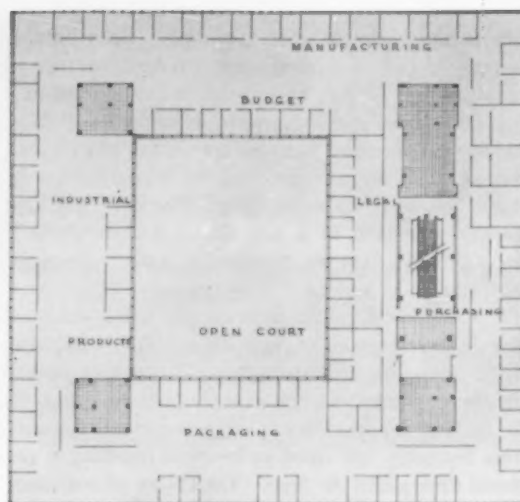
screens. The visual result is almost as brittle as the staccato sounds of the typewriter keys. The only variation on the color theme is found in the dresses worn by the office staff. This device of using only primary colors is an arbitrary one and perhaps only the trained psychologist can give the final answer as



VIEW FROM THE NORTHEAST PARKING LOT SHOWING OPEN LOGGIA AND FUNCTION OF VERTICAL LOUVERS.



FIRST FLOOR PLAN



SECOND FLOOR PLAN

to its validity. All of the office furniture and accessories have been skillfully designed to preserve the character carefully created in the general design and the results obtained are stimulating and quite appropriate.

Remembering how simple and unobtrusive the elements of the roof appear from the exterior one finds the same sense of simplicity and orderliness is retained at close up. The larger penthouse contains a complete health and exercise center including solarium and sun terrace. Planting boxes used as wind breaks and for privacy are somewhat uninspiring and seem to be out of character.

Descending to the basement one enters a labyrinth of cells of various sizes housing mechanical services, a medical division and the engineering staff as well as kitchen and cafeteria. The cafeteria is the gayest and most unselfconscious space in the entire building. It is generous in size and opens to an extremely pleasant terrace on the lower level with a broad sweep of the grounds in view. From the exterior this touch of gaiety makes the south facade the most inviting and colorful of all.

Returning again to the entrance and court the last element of the composition fills the northeast corner of the first floor level. Here one discovers through a modest glass-enclosed lobby an exciting small meeting room which accommodates about one hundred and forty people. Here company meetings of all sorts are held and it is a completely autonomous space with its own service needs including

a projection room and other necessary facilities. The meeting room itself is finely proportioned and the shaping of the ceiling with its adjustable aluminum acoustical baffles reflecting the deep blue upholstered seats is exciting and extremely effective. Again all of the details as well as the carefully controlled lighting are skillfully handled.

Having left the building by way of the north porch and surveying the handsomely treated grounds, complete with a selection and variety of native landscape material so appropriate to the scene, the over-riding and lasting impression is one of extreme elegance in a contemporary architectural statement. Where faults seem to occur they are faults of omission rather than commission. Here indeed is a structure appropriate and sympathetic to the scene. In spite of the fact that it is an attempt to exploit and dramatize a single contemporary material, it is handled with great reserve and without ostentation. Reflecting an architectural idiom perfected and developed by this most successful architectural team over the past few years it expresses perhaps the highest sense of refinement yet achieved. Of classic simplicity it is more an end than a beginning however. What more indeed can be done in a modern way with the trabeated system? And yet it truly represents a fitting palace for the Piedmont symbolically appropriate to the Virginia scene. Dignified and restrained, the new Reynolds Metals building is a noteworthy contribution to the neoclassic heritage of Mr. Jefferson's countryside.

IT IS MY HOPE that the following comments pertaining to the preparation of the new Standard Forms of Agreement between Owner and Architect prepared by the Office Practice Committee and approved by the Board for printing and distribution will be of interest at this time. William Stanley Parker, FAIA, Consultant to the Committee, will write a column in the *Journal* beginning in the January issue, dealing in more detail with these documents.

In 1955 the Office Practice Committee, under the chairmanship of David Baer, prepared and submitted to the membership a very detailed questionnaire bearing on the Standard Forms of Agreement. The replies were tabulated by the Octagon staff and the cross section opinion of over one thousand of our members were studied in detail, through the intervening period, by task forces and then by the full Committee representing each Region of the Institute. The earlier drafts of the new forms were definitely too long and detailed for general acceptance. It was desirable, of course, to retain the most important features in the new forms and at the same time compact the material considered necessary. It was at all times borne in mind that these new forms must prove acceptable to the clients as well as to the architects, to provide forms that clearly defined the obligations deemed essential between the parties. In their final forms, the three Agreements between Owner and Architect were reviewed for clarity and legality by William T. Carr Lowe, Legal Counsellor to the Institute.

The questionnaire answers disclosed objections as well as approvals of the long-existing Standard Forms of Agreement. It was the belief of the Committee that the new forms would overcome resistance to the use of the existing forms as a general rule, but in all probability would not supersede them, particularly for minor projects. The judicious selection of an agreement form will depend upon the architect's own judgement and the conditions involved. The three new Standard forms of agreement between Owner and Architect are: *B-131, Percentage Basis, (Engineers' Fees Included)*; *B-211, Basis of a Multiple of Direct Personnel Expense*; and *B-311, Basis of Professional Fee Plus Reimbursement of Expense*. The latter two are modifications of the first form, since the percentage basis remains preponderately the most favored form of agreement.

General acceptance of the new forms would suggest that Chapters and Regional organizations of the Institute review their present circulars descriptive of recommended minimum fees and services for possible conflict with the provisions of the documents as to (a) retainer fee provisions and (b) schedule for payments, since these may involve important de-

Do you know your Documents?

FRANK V. MAYO, FAIA
Chairman, Office Practice Committee, AIA

viations from current practice. Furthermore, blank spaces are left in the agreement forms to be filled in by the architect according to his own experience or local practice.

To summarize: The new contract documents are more detailed as to both the Owner's and the Architect's responsibilities and obligations, hence for smaller projects they may not be as suitable as the present *B-101* and *B-121* documents, but not necessarily so.

Being more detailed, provisions for practice are more clearly defined to meet the criticism of attorneys that our forms are "slanted toward the architect." On the other hand, the obligations of the Owner are, we believe, clarified. The Owner will better be enabled to understand in advance the services to be rendered, which are normal to good practice. However, the Architect should be on guard to render the services lest he be vulnerable to attack for material breach of contract (a caution that applies to the present agreements with equal force).

As a final word, the Committee agrees that it is frequently required in any contract that changes be made to suit an Owner or his attorney. Is it not better to delete a questioned word or section upon which one can yield, in a spirit of compromise, than to have to add provisions in one's favor to a document accepted as standard throughout the country?

We hope the membership will accept and use these new Agreements as valuable aids in their practice.

The above-mentioned documents will appear in the new and completely revised eighth edition of the "Handbook of Architectural Practice," which is published this month. Clinton H. Cowgill, FAIA, Staff Executive of the Office Practice Committee, is the Editor of the new edition of the Handbook.

Library Notes

THIS LIST INCLUDES BOOKS ON American architects who worked primarily before 1900. All are available on the Library Loan Service—fifty cents for the first, twenty-five cents for each additional.

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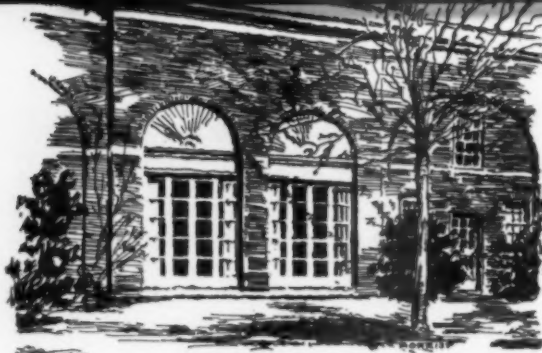
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BOOK REVIEWS

SCHOOLHOUSE

Walter McQuade, AIA, Editor, (272 pp. 8 3/4" x 11". Illust. New York: 1958: Simon & Schuster, \$10.00) one of the best and most important books on schools in recent years, is here reviewed by Eric Pawley, AIA, Staff Executive of the AIA School Building Committee and one of our best-informed minds on the latest in school planning and education.

By Eric Pawley

Infrequently a book is made with both mind and heart. Walter McQuade, AIA, the most architecturally perceptive member of the *Architectural Forum* editorial staff, has done this in a recent year's leave of absence. It was produced under implausible conditions, and with a big business sponsor, Alcoa, big enough in another way, to value the sincere soft sell. "As soon as you become a corporation, you acquire certain responsibilities." "A corporation . . . sensibly cares about the future that it shares with the whole country . . ."

With generous pages of acknowledgments for help from others, McQuade has made a fantastically effective collection of photographs, reproduced in velvety offset, of childhood-in-relation-to-school-architecture. These pictures alone, even if without text, would tell what our schools mean and how children learn.

The subtitle is "What to do when your neighborhood needs a new school." Here is program material—what happens in and about school and in childhood and young adolescence. Here are views and details of some of our best-known new schools, most of them shown in use. Some of Blechman's deceptively childlike cartoons, also included, sneak up behind you and plant ideas with a hypodermic pencil you hardly feel. Parts of the text give wonderful insight on certain problems. Did you know that first grade moppets doing arithmetic may run a temperature of 102°? Or that 11% are

lefthanded? The book's concern, properly, is with the child's response to his environment, really the educational motivation of the school building. This book will disarm many critics.

There are chapters on the approach to design, on choosing an architect, finance, cost-comparison pitfalls, technical notes on site, structure and equipment, comparative charts of architectural detail and a pictorial review of excellent quality.

OK, are we off the deep end? We have surprisingly few and minor objections. Even the misspelling "conforming . . . teenagers" has a certain coinage-value connotation of "comforting." It would be incautious of us not to challenge the implication that AIA establishes national fee-schedules—of course these are purely a local recommendation. There is much good advice on client-architect relationships and, while it is hard to quarrel with the objective of the statement on "supervision throughout by principals of the firm," the context does not define what is meant by "supervision throughout." A firm of three principals, one retired and one an engineer, would find it impossible to feed its draftsmen next year if the active architect-principal "supervised throughout" the 70 schools (of good quality) they had under construction last year. The procedural chart does not cover the quite standard provision that client furnishes the site survey.

In one respect this book tries to do too much. The detail charts and some of the technical notes, on lighting, etc.—while prepared with the best of professional advice and currently valid—may give the lay reader a delusion of competence in some of these quite complex and rapidly changing disciplines. A few of the charts also presuppose better-than-normal graphic visualization: those are tube fixtures in perspective, not truncated conical globes—but enough of this.

We have not seen a better book on schools—get one. You will enjoy the pictures of children each time you look at them. Get one for that objector—that weed in your client's garden—it's a quick, ten-dollar cultivator.

THE CHURCH INCARNATE THE SACRED FUNCTION OF CHRISTIAN ARCHITECTURE

By Rudolf Schwarz, translated by Cynthia Harris (232 pp. Chicago: Henry Regnery, \$7.50). *Rudolf Schwarz is one of the most profound architects engaged in religious architecture today. We have waited twenty years for this book to become available in English. It is reviewed by Dr. Martin E. Marty, Lutheran clergyman and Associate Editor of the Christian Century.*

By Martin E. Marty

What is designedly a "primer for church building" will prove to be a dissertation beyond the depth of most of us. To review it poses a dilemma: I have no choice but to recommend it enthusiastically. During the next year, every architect I meet who will have followed my advice and read it is likely to ask what I—or it!—was all about, and I shall not be sure that I can answer. It can make its way to the reaches of our minds if we approach it only without preconceptions concerning what books of this type "ought to be about." It is like no other book, for it is neither preoccupied with the technical nor is it a conventionally-reasoned treatise on the synthesis of architecture and religion. It is better than either. It is a genre all to itself.

Books like this seem to hone a razor's edge of distinction between genius (which this one reveals) or charlatanry (which it would, were it by someone other than Schwarz). You will be prepared for its type if you have read Paul Klee on art, Moholy-Nagy on design, Frank Lloyd Wright on organic architec-

ture, or Georges Rouault on the religious aspect of his work. What anchors this book is its hold in authentic Christian theology and its consistent religious realism which a sometimes somewhat mystic language cannot dull. The test of its genius? We may look at Schwarz's churches for the proof of his pudding, the great, white arenas of "holy emptiness" for encounter of man with God before the altar, set on its great, holy hill. Another test? We may look at its influence. The German version has been lying around for twenty years, its ideas pirated by many, acknowledged by few. Mies van der Rohe is an exception: He has written the foreword, in a grateful and graceful spirit.

"Sacred structure," complains Schwarz, "is no longer understood as that which it actually is: as structure, as the dogmatics of eternity." "We cannot return to the Middle Ages"—the spires, the pillars, the arches, the pinnacles, the responders are valid for all times, but we cannot create these now "because life has gone on" and we are not historians, but creating men. The task is "to build churches out of that reality which we experience and verify every day; to take this our own reality so seriously and to recognize it to be so holy that it may be able to enter in before God. To renew the old teachings concerning sacred work by trying to recognize the body, even as it is real to us today, as creature and as revelation, and by trying to render it so; to reinstitute the body in its dignity and to do our work so well that this body may prove to be 'sacred body.' And beyond all this to guard ourselves against repeating the old words when for us no living content is connected with them."

Amen.

Schwarz proceeds past six archetypes to the whole, the cathedral for all times. There is the ring, with the people gathered around the altar; the open ring of sacred parting on the horizontal dimension; and the chalice of light: sacred parting in the vertical dimension (as when the martyrs of old "saw the heavens opened"). The fourth is the way,

for pilgrims in a troubled time; fifth, the dark chalice of reception at the altar of the mysteries. Then all explodes in the "dome of light"—for Schwarz light is a structural element. He is fascinated by it as a tantalized blind man would be: he is writing out of Germany's blackest hour (1938). Finally comes the cathedral of all times, a recapitulation of all these movements in progress and process.

The author called this a "book for doing," a practically, do-it-yourself work. In the last analysis it is this, but first it sets so difficult a task! He casts his work in a profound dimension: "In the realm of the creative [church architecture] stands at the place where the question concerning the knowledge of God stands in the realm of scholarship. This is the primal question in our calling . . . Beginning on this basis, he could write no other kind of book. Reading it demands a high price in attention, commitment, and release from past prejudice as to what a book on architecture ought to set out to do. The architect who pays this price will be rewarded. If he begins to understand it, and we can all—including the author himself—only begin, our religious architecture may escape the moment of its new capture by clichés. The recovery of church building in Europe in our times can be seen to have origins in work like this. The architect who has learned from it will begin to build every church at the beginning.

Religion will benefit, as will all fields of architecture.

MEASUREMENT OF COLOUR. By W. D. Wright. 2nd edition. 263 pp. Illus. 5½" x 8¾". New York: 1958: Macmillan. \$10.75

While this text is by an eminent British professor of technical optics and deals with principles, methods and applications of the trichromatic system of color measurement, including a considerable amount of physiology and mathematics—there is much here for the architect who wants fundamental knowledge of color. It is comprehensive and well-illustrated. In fact, an understanding of the illustrations alone would

give a fair basis of color knowledge and the integral calculus can be skipped. We particularly liked Professor Wright's explanation of the quality of fluorescent lighting and his frank comment that "The fluorescent lamp has, in fact, become the problem lamp of the illuminating engineer."

A well-placed shot loaded with the authority of this text is guaranteed to sink any hostile lay color-committee—" . . . so . . . you know all about color . . .?" EP

THE CHAPEL AT RONCHAMP. By Le Corbusier. 136 pp. 7½" x 7¾". New York: 1957: Frederick A. Praeger, Inc. \$5.50.

The designer of this controversial structure here tells its story, by photograph, drawing, structural detail and the written word. Here are the ideas and motivations which influenced Le Corbusier in design and construction. His progress report, illustrated with his own sketches, affords excellent insight into the complex imagination and restless creativity of this unorthodox architectural genius. The book is worthwhile for the illustrations alone, for many of them are photographs of great depth and beauty.

THE STEEL SKELETON. Volume II: Plastic Behaviour and Design. By J. F. Baker, M. R. Horne and J. Heyman. 420 pp. 6¾" x 10¾". Cambridge: 1956: The Cambridge University Press. \$12.00

Volume I of "The Steel Skeleton" was subtitled "Elastic Behaviour and Design." The two books describe the experimental investigations of the Steel Structures Research Committee begun in 1929, culminating in the formulation of its recommendations, based on elastic behavior. Volume II particularly describes the new investigations begun in 1936, setting forth a simplified design method and paying special attention to instability, behaviour up to collapse and a design method for multi-story welded frames. As a complete account of what is involved in engineering research the book should interest anyone concerned with the practical application of science to the building.

THE EDITOR'S ASIDES

I HOPE YOU'RE ALL properly admiring the Kansas City Chapter's plan for downtown KC. Note the closed off streets—closed, that is, to vehicular traffic, but made as attractive as possible to pedestrians. Now I'm happy to see that another Chapter has come out against turning our cities completely over to the sleek, squat monsters with the chromium teeth.

The Civic Design Committee of the New York Chapter has advocated the elimination of vehicular roadways through Washington Square. The proposed widening of Fifth Avenue through the Square, straddling the Washington Memorial Arch, would be the final step toward the ruination of this old square, which has been the center of a residential community for a century and a half, and one of the city's most beloved spots. It gets down to: Who is the more important, the man on foot who lives in the neighborhood, or the man behind the wheel who lives somewhere else?—to say nothing of the children and their mothers and the amenities of city living.

ELSEWHERE IN THIS ISSUE is a report on "Planning and Community Appearance," the slim little book put out by the Joint Committee on Design Control of the New York Chapter AIA and the New York Regional Chapter AIP. I just want to put in my personal plug for it. It is a most excellent volume, and should be in the hands of every architect who has the remotest connection with planning in his community, as well as in the hands of every possible planning or zoning board, commission or committee.

There is one sad note in it. On page 65 is a photograph of the Place Vendôme in Paris, which the caption says, "with its uniform architectural features is protected from change by special design regulations." "Protected from change" it says. Look at it. The magnificent old square is a parking lot, jammed with cars. All you can see is shining car-tops,

with Napoleon's column rising from their midst. There might as well be a neon sign on the facade of the Ritz!

I'VE JUST BEEN reading Tom Creighton's "P. S." in the October *P/A* (I don't have to say "good old uh-Tom" because we worked together in the Schultze and Weaver days, and our kids used to play together in Stamford and Port Chester). Of course, he's so right about our so-called critical judgment being influenced by our preconceptions and prejudices—often having to do with completely dis-associated matters. I wonder if that really isn't just as true of critics of painting, music and books? Only in those fields of criticism there are so many "legitimate" critics, whose reputations (and opinions) as critics are so well established that it never occurs to us to think of their childhood-based prejudices (although it probably occurs to the artist being criticized!) However, getting back to architectural criticism, juries usually do a pretty good job of objectivity on most competitions, whether the names of the architects be concealed or not. The *Forum* has just tried a job of pure architectural criticism in its October issue. We present one in this issue. It will be very interesting to see what reactions they bring.

ONE OF MY PET peeves is the blurb written in the architectural press by what are obviously non-architect writers. (Much of it is gushing rhapsody over something which is only new and different.) Certainly I don't blame the magazines for having non-architects on their staff—the *Journal* has 'em. But everything they write should be checked by someone "in the know."

For example: In the October *Forum*, on page 150, is a story about the remodelling of the Bankers' Trust building at Fifth Avenue and 44th Street. The building had, on its Fifth Avenue front, four columns which extended through the two

lower floors, with entablature above. They were pure Greek Doric, right out of the book—as the accompanying photograph shows. Believe it or not, the story refers to them as "Huge, Romanesque marble pillars . . ."! Not only does the glaring historical boo-boo arouse one's spleen to the choking point (choking the author, that is), but the use of the word "pillar" annoys because although according to the dictionary they are synonymous, no architect would use the word. A column is a column is a column!

THE *Reader's Digest* has done it again. Probably nearly everybody has by now seen the October issue, with its condensation of Dorothy Thompson's "Must Schools Be Palaces?" from the August 1957 *Ladies' Home Journal*. After the first blast last year, the Editor of the *R/D* received considerable education from many sources, including not only the AIA but the NEA and the school administrator groups. Apparently he educates hard. This outburst seems aimed primarily at the school boards and the school administrators—except that after describing a very plush school up in Miss Thompson's part of New England, she says, "There are, of course, people who want such schools—architects and contractors first of all." The sweeping injustice of this statement is almost funny, except for its underlying viciousness. As an architect who has lost many hours and dollars trying to figure out ways to cut costs on a school job, and then more hours and dollars revising the plans when the bids came in too high anyway, I resent that statement very deeply—and so will hundreds of others.

Fortunately, the NEA, the National School Boards Association, the School Facilities Council, *School Management* magazine, *Coronet*, *Parents' Magazine*, and others are taking up the battle.

Subsurface Investigations

LOUIS J. GOODMAN*

This article deals with the field and laboratory investigations which are essential to a safe and economic foundation and design and is being presented concurrently with an article on land planning by James E. Glavin, A.S.L.A.

THE FUNCTION of a properly designed foundation is to support loads resting on it without causing excessive stresses within the soil mass at any depth beneath the foundation. Stresses are considered excessive if a complete rupture within the supporting soil mass occurs or if detrimental settlements result. No structure can perform any better than the foundation upon which it rests. Therefore, it is apparent that one of the most important steps in the solution of a foundation problem is determining underground conditions that will affect the design. Field and laboratory investigations required to obtain this necessary information are called the subsurface investigation program.

Subsurface exploration programs are influenced by a number of fac-

tors, such as the size and type of project, general character of soils in the area of work, and the time available for the investigation. A relatively small project such as a light one-story building does not economically justify an expensive soil exploration program. An elaborate exploration program consisting of considerable field and laboratory investigations would not be justified on sites where the subsoil conditions are erratic. For the latter case, strategically located drill holes with intermediate subsurface soundings would provide sufficient information for site appraisal and foundation purposes. This would result in economies in both expenditures and time with respect to field investigations. On the other hand, an important structure founded over a deposit of fairly homogeneous clay would require an extensive soil exploration program.

Adequate and accurate subsurface data will enable architects and engineers to design foundations for both safety and economy. Possible savings in time and money will more than pay cost of subsurface investigation in many cases.

Subsurface investigations may be roughly subdivided into three classes:

- **foundation investigations**
to investigate sites for new structures
- **stability of failure investigations**
to investigate cause of distress or failure of existing structures
- **earthwork investigations**
to evaluate suitability of natural materials for construction purposes

This paper will concern itself with the foundation investigation aspect of subsurface exploration, or in other words, site investigation for new structures with special attention given to methods of preliminary underground exploration.

PROCEDURE FOR INVESTIGATION

A summary of the various phases of a complete foundation investigation follows:

reconnaissance:

- **geologic study**
- **site inspection**

purpose of reconnaissance is to determine nature of site and to estimate soil conditions. Results of this study are useful in planning the exploratory investigation and in interpreting results of investigation.

preliminary exploratory investigation: basic information required:

basic information required:

- **horizontal control**—by co-ordinate
- **depth, extent and composition of critical soil strata**
- **ground-water level**
- **depth to rock when necessary**
- **estimate of engineering properties of soil**

In many cases preliminary borings give all information required for design purposes. In some cases preliminary borings may disclose difficult foundation conditions necessitating more detailed explorations.

detailed exploration:

- **additional test borings**
- **undisturbed sampling if cohesive soils are encountered at critical depths**
- **laboratory and/or field tests if data**

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on soil strength, settlement, etc., are needed

analysis of results of exploratory investigations:

- laboratory tests
 - classification tests to afford check on visual examination of soil samples
 - consolidation and shear tests where necessary for settlement studies and stability considerations
- plot boring records
 - prepare soil profiles
- evaluation of boring data
 - estimate bearing capacities
 - soil behavior predictions
 - foundation possibilities

economic studies:

- tentative designs and cost estimates for different types of foundations which appear to be adapted to site in question.

METHODS OF PRELIMINARY UNDERGROUND EXPLORATION

Primary aim of preliminary explorations is to obtain an approximate picture of underground conditions at a nominal cost. A reconnaissance consisting of a geologic study and a site inspection should be made first to estimate soil conditions so that a satisfactory and economical method of preliminary exploration is selected.

The most common and in many cases the best method of preliminary exploration is the dry-sample type of test boring. This is a combined operation consisting of drilling to open a hole in the ground and driving a sampling spoon at the bottom of the hole to obtain a sample that is suitable for visual examination and for water content and classification tests. The hole is generally advanced by washing inside a driven casing or by using an auger. This operation is applicable in both cohesionless and cohesive soils and is the most reliable of the inexpensive methods. Additional valuable information is provided by measuring penetration resistance of the sampling spoon. The number of blows required of a specified weight of hammer falling a specified distance to drive the sampler 1' is an indication of the density of cohesionless soils and of the consistency of cohesive soils. The penetration test

which is generally accepted as standard in the United States consists of a 140-pound hammer falling 30" to drive a 1.4" or a 1.5" ID sampling spoon. This record is so important that it should be specified as a part of the work. Also, in view of the fact that considerable data relating soil density, consistency and strength to the standard penetration test have been collected, the use of other procedures is not desirable. Resistance data from this method of sampling can be used by a qualified person to estimate bearing capacities.

The soil auger is the simplest equipment for making a shallow hole in the ground. Several different styles of augers are available, varying from devices resembling a carpenter's tool to the post-hole auger which consists of two curved blades which retain the soil as it is cut. Rotation of the auger loosens the soil and samples are recovered from material brought up on augers when removed to the surface. The post-hole auger is a very effective type of auger and is available in sizes from 2" to 12" in diameter. Hand-operated augers can be used to reach depths as great as 20', whereas motor-driven augers are available which are capable of drilling holes in some soils as deep as 30' to 40' in a matter of minutes. Auger borings are used principally in dam site exploration and in highway and airfield work. They can be used in many cohesive and cohesionless soils above the ground-water table.

Test pits afford an excellent means of shallow exploration where conditions are favorable for excavation since the soils can be inspected in place in their natural condition. Arrangement, uniformity and inclination or dip of the strata is readily disclosed by an inspection of the sides of the pit.

Sounding rods or probing rods have been developed for determining the consistency of cohesive deposits or the relative density of cohesionless deposits. This method of investigating subsoil conditions is based on measuring the resistance of the soil against penetration of a device known as a penetrometer and may be accomplished by dynamic or static tests. As a general rule, dy-

namic penetration tests are preferable in cohesionless deposits and static tests in cohesive materials. Until recently, no soil samples could be taken by this method.

The Apfel-Goodman¹ penetrometer was recently developed to sound between boring locations and to probe excavations for footing foundation purposes. The penetration test is dynamic in nature, consisting of a 35-pound weight falling 30" to drive a rod and recording the blows per foot for several feet or more penetration. It can be noted that the driving energy is $\frac{1}{4}$ that from the standard penetration test. Experience to date has been such as to demonstrate that a 35-pound weight can be easily handled by one man. This apparatus has been used with considerable success for probing excavations prior to pouring of footing foundations, to determine whether or not there are any loose or soft locations. Another application that appears to have merit is that of obtaining resistance data along with samples which can be used to afford indications of the allowable bearing capacities of soils at shallow depths.

Geophysical exploration² based on seismographic or electrical resistivity methods have been employed in various fields of engineering for more than 25 years. These methods have been used considerably in recent years for preliminary investigations of dam sites and for highway work. When properly correlated with the results of a few check borings, both refraction seismic and earth-resistivity methods have been found to be useful, rapid and economical in obtaining preliminary information on the depth and nature of subsurface formations.³ The seismic method is based on the principle that sound travels more rapidly through dense materials than through loose materials. Velocities as high as 18,000 to 20,000 feet/second have been recorded in dense, solid rock while

1 "Subsurface Explorations with the A-G Soil Penetrometer" by L. J. Goodman, E. T. Apfel and Capt. H. W. Graves, *Public Works Magazine*, December 1957.

2 "Geophysical Exploration" by C. A. Heiband, Prentice-Hall, 1940.

3 "Seismic Explorations Save Money" by E. T. Apfel and L. J. Goodman, *Public Works Magazine*, May 1955.

velocities as low as 600 fps have been found in loose sand. The electrical method consists of the measurement of changes in the electrical resistance of the soil. Dense rock has a very high electrical resistivity and soft, saturated clay has a low resistance.

When a soil boring is stopped abruptly by some obstruction and the hole is not very deep, offsets should be made to determine whether a boulder or bed rock is present. If obstructions are still encountered, rock drilling should be done. A commonly accepted basis for making core borings is when a material is encountered which takes more than 60 blows of a 140-pound hammer falling 30" to drive a 1.4" or 1.5" ID sampling spoon 1 foot. Resistance of this magnitude is generally termed refusal and ordinary earth-drilling tools are unsuited for further exploration. Specifications usually call for minimum coring of 5' or 10'. If there is evidence of deep weathering or solution channels, deeper coring until sound rock is encountered may be necessary, especially if the structure is to be founded on rock. The soundness of the rock is determined by the core recovery, which is a ratio of the length of core obtained

to the distance cored. In sound rock, a recovery of over 80% is expected. Diamond drilling is the most advisable of the different ways of taking core borings.

The results of the preliminary underground exploration may indicate the need for additional detailed data before a safe or economical design can be made. The detailed investigation has as its objective accurate data on the engineering properties of the critical soil strata. This can be accomplished by undisturbed sampling along with the necessary laboratory tests and/or field tests on the soils in place. However, it is emphasized that the experience of the writer in over 100 underground exploration projects has been such that the results of the preliminary exploration, if interpreted properly, give all the information needed for foundation choice and design purposes in the majority of cases.

A summary of basic data relative to the various sampling methods as prepared in tabular form by H. A. Mohr is given in table on page

SPACING AND DEPTH OF BORINGS

No definite rules can be established for spacing and depth of test borings since they depend not only

on type of structure, but also on uniformity of the soil deposit. Ideally, a preliminary estimate of spacing and depth of borings should be made based on a reconnaissance which will determine probable nature of deposit. Then the actual program of soil exploration should be developed as subsoil information is compiled.

For example, if loose or soft material is encountered within the depth of significant stress due to the loaded area, the boring should be continued until 15 consecutive feet of 15-to-20-blow material has been drilled below the weak deposit. Borings which are stopped before this information is obtained are of little value. The thickness of the weak layer is necessary if a settlement study is to be made and adequate information on the underlying stronger material is necessary if it is desired to consider the use of piles. Also, on sites where subsoil conditions are erratic, strategically located test borings with intermediate subsurface soundings would probably suffice for most projects, resulting in economies in both time and money.

The following spacings and depths are recommended as a guide in planning a preliminary soil exploration program:

<i>type of structure or project</i>	<i>spacing of borings</i>	<i>depth of borings</i>
one-story buildings *	75'-100'	20' to 30' below foundation level with at least one deep boring to search for hidden weak deposits
multi-story buildings *	40'-50'	for a heavily loaded structure, deep boring should go to a depth approximately 2x width of structure or rock, whichever comes first
highways (subgrade)	500'	3'-5' min below subgrade
earth dams	100'	40' to 50' min or 10' into sound rock, whichever comes first
borrow pits	100'	10' to 20'

* For buildings of ordinary size, the first boring should be drilled to a depth within which the stress caused by the structure might cause excessive settlement.

BORING REPORT

Records of subsurface investigations and sampling operations should be clear and accurate. The boring report should contain following information if it is to be of value:

- starting grade of each boring with reference to an established base
- true cross-section of ground—showing depth of all strata boundaries below starting grade
- elevation and depth of ground-water level and any unusual water conditions. Elevation of ground-water level when first encountered and at 24 hours after completion of boring should be reported
- number of blows/foot of casing penetration together with weight and distance of hammer fall and same data for driving the sampler
- proper identification and classification of each different type of soil encountered
- record of every trial or uncompleted boring
- plot plan showing location of each boring with reference to definite survey lines
- identification as to project, owner, engineer or architect, location and date

METHODS OF UNDERGROUND EXPLORATION AND SAMPLING

<i>common name of method</i>	<i>materials in which used</i>	<i>method of advancing the hole</i>	<i>method of sampling</i>	<i>value for foundation purposes</i>
wash borings	all soils. cannot penetrate boulders.	washing inside a driven casing.	samples recovered from the wash water.	almost valueless and dangerous because results are deceptive.
dry-sample boring	all soils. cannot penetrate boulders or large obstructions.	washing inside a driven casing.	open-end pipe or spoon driven into soil at bottom of hole.	most reliable of inexpensive methods. data on compaction of soil obtained by measuring penetration resistance of spoon.
undisturbed sampling	samples obtained only from cohesive soils.	usually washing inside a 6-in. casing. augers may be used.	special samplingspoon designed to recover large samples.	used primarily to obtain samples of compressible soils for laboratory study.
auger boring	cohesive soils and cohesionless soils above groundwater elevation.	augers rotated until filled with soil and then removed to surface.	samples recovered from material brought up on augers.	satisfactory for highway exploration at shallow depths.
well drilling	all soils, boulders, and rock.	churn drilling with power machine.	bailed sample of churned material or samples from clay socket.	clay socket samples are dry samples. bailed samples are valueless.
rotary drilling	all soils, boulders, and rock.	rotating bits operating in a heavy circulating liquid.	samples recovered from circulating liquid.	samples are of no value.
core borings	boulders, sound rock, and frozen soils.	rotating coring tools: diamond shot, or steel-tooth cutters.	cores cut and recovered by tools.	best method of determining character and condition of rock.
test pits	all soils. in pervious soils below groundwater level pneumatic caisson or lowering of groundwater is necessary.	hand digging in sheeted or lagged pit. power excavation occasionally used.	samples taken by hand from original position in ground.	materials can be inspected in natural condition and place.

This table is taken from "Exploration of Soil Conditions and Sampling Operations" by H. A. Mohr, Soil Mechanics, Series 21, Third Revised Edition, Publication 378 of the Graduate School of Engineering, Harvard University, November 1943.
NOTE: Test rods, jet probings, geophysical methods, and so forth are not included in this table, because no samples are obtained.

Land Planning Considerations in a Building Program

JAMES E. GLAVIN, ASLA
Landscape Architect

GONE ARE THE DAYS when the school, the manufacturing concern, the church or retail establishment was located on an urban site barely large enough to accommodate the building itself. The rapid increase in population, the advent of the automobile age and the migration to the suburbs are but a few of the contributing factors that make the land planning requirements increasingly important. This is especially true in the rapidly growing fringes of metropolitan areas. Needless to say, site selection is the first major decision that must be made by the designer and client.

The recommendation of the design team must be justified by complete information on any or all sites studied. The central school or industrial concern must know during preliminary stages of design what costs are involved, not only on the basis of building cubage, but cubage

plus costs of earthwork, storm drainage, sanitary sewage disposal, utilities such as power, telephone, gas, parking areas, athletic or recreational facilities, drives, walks, curbs, seeding and planting. On many types of projects the above "other than building costs" may run as high as 20% of the total cost of construction. In addition to the above considerations, and no less important, is the nature of the soil from the standpoint of foundation costs. Taking all of the above items seriously therefore suggests to the designer the value of studying several sites. This involves much time, research and effort. It also involves option, survey and soil-boring costs which must be met by the client. These costs are small compared to the total investment, and the information gained therefrom is necessary for the designer to justify the proper choice more intelligently. Past experience

has proved the worth of such a program. Past experience has also proved the disastrous results of neglecting such a program under the guise of speed or expediency.

SITE SELECTION

The general location of a site is most often predetermined by the owner. It is at this point that the design team should go into operation. A study of the land-use programs established by governmental planning agencies should be undertaken, as well as a study of US Geological survey maps, zoning maps, arterial highway programs, water, sewage, drainage, park and recreational programs of governmental agencies concerned. Some school districts and industries in central New York have, after long study, purchased sites now for use when presently planned governmental facilities are in operation. The purchase cost of such property is usually attractive under such circumstances.

After careful analysis of the above let us assume that the search is narrowed down to three or four apparently desirable sites. It is then that the following check list may be of assistance in considering the pertinent items.

- obtain option on each site for long enough to allow complete study
- get a good topographic survey of each site—not as complete as that required for final site upon which preliminary design and working drawings will be based—designer should judge information needed at this stage
- undertake preliminary studies of each site based on topographic surveys—use all members of design team. This coordinated effort should result in a set of solutions, each adapted to the individual site involved
- undertake an exploratory soil-boring program on each site based on the above with competent soil-boring firm—include sufficient holes to analyze general bearing conditions and excavation problems within and outside building area—water-table elevations should be recorded a minimum of 24 hrs after completion of each hole
- if sanitary sewers are not available to be in foreseeable future, make percolation tests in pertinent areas determined by preliminary studies,

so that reasonable cost estimates can be made. Adverse soil conditions could eliminate a site from consideration. State Health Department requirements should be kept in mind, with particular attention to adequate variation in grade, bearing in mind that if a sand filter must be used, an adequate flowing water-course must be available for an outfall. Usual minimum drop to such an outfall is 8'-10' below floor elevation—depending on building dimensions and size of siphon. Pumps may be used if other considerations make their use advisable

- storm-water disposal could well eliminate a site from consideration. "Hemmed in" properties adjacent to or in villages or fast-growing suburbs have dangerous legal implications unless an adequate stream or storm sewer is available. An easement may be the answer, requiring legal and cost analysis. Approvals by pertinent government agencies should be obtained before spilling large amounts of storm water in road ditches or culverts. Many law suits are pending on this subject at the present time. It should not be regarded lightly
- water supply problems can also eliminate a site from consideration. During site-selection phase of a building program, in areas lacking water systems, a geologist, familiar with the area, would be most valuable as a consultant to the client. On smaller projects, a history of water conditions in the area can be obtained from local well drillers and State Health Department sanitary engineers. The design team should carefully avoid any speculation on this subject
- relationship of building or buildings to existing power and gas facilities will affect cost. Topographic and other considerations will affect building locations, therefore this item is of some consequence in site comparisons
- general considerations affecting the study, of course, are well known, but for purposes of checklisting it would be well to mention—
 - size: is site large enough to provide all needed facilities, even if all are not constructed under initial contracts? Does it allow for reasonable and unforeseeable expansion?
 - shape: does shape allow solution of basic problems, without undue or excessive circulation patterns, utility lengths, etc?

topography: is it so steep as to incur excessive excavation and grading costs, with lost space in slope, and high maintenance costs as an added liability?
 is it so flat as to require excessive drainage facilities?
 can excavation and fill be balanced on site?

Complete site studies based on all the facts available must be the basis for justifiable comparative estimates for like facilities.

The client can then be presented with realistic figures that reflect many of the essential operations such as:

clearing and grubbing	headwalls
topsoil stripping	storm and sanitary lines
building and site excavation	septic tanks
rock excavation	siphon chambers
grading	tile fields
topsoil spread	sand filter beds or cesspools
seeding and mulching	chlorinators
road, parking area, bicycle and play court paving	rip rap
walks and paths	headwalls
curbs	hydrants
steps	water lines
fences	power service
catch basins	telephone service
manholes	gas service
	other special facilities such as railroad sidings

When comparative foundation costs are added to the above items the architect can be satisfied that all informative needs are covered. It should clearly indicate that a round figure pulled out of a hat cannot and should not be added to a cubage figure as a basis for a project budget.

Assuming that the above studies and analyses have been completed, recommendations submitted, and the site purchased, the next step is the topographic survey.

The first basic tool required by the design team prior to commencement of work is a good topographic survey. The designer should be in a position to advise the client as to his exact survey needs, justify the cost of same, and specify the exact requirements to the surveyor by means of a checklist.

The above is necessary for the following reasons:

- many surveyors in a client's territory are well experienced in boundary work but have had little experience in the type of topographic survey required for a large project such as a central school or industrial concern involving many thousands of dollars in earthwork and drainage.
- a topographic survey can have a different meaning to each of several surveyors—depending on background experience, training, etc.
- the topographic survey is the basic research data on which a project is conceived, and a design conceived on incomplete, vague or inaccurate data can prove costly to the client and embarrassing to the designer.
- the topographic survey is the basis for the bidding and construction documents. Incomplete, vague or inaccurate data can lead to terrifying extras. When one considers that a 6" discrepancy over 5 acres amounts to approx 4000 cubic yards, the accuracy of the 'topo' becomes a must. Many of the central schools in up-state New York develop 30 to 50 acres.

CHECK LIST OF INFORMATION NEEDED ON SURVEY MAP

Following information is needed on this survey:

scale 1" = (scale varies depending on size of site)

north point

date

surveyor's name and license number
Boundary Surveys shall show the following information:

- bearings and distances of all property lines and adjacent rights-of-way. Precision shall equal 1/3000 or better
- all easements, if any, across property to be shown
- total acreage of tract
- corners shall be staked with iron pins and marker stakes shall be provided

Topographic Surveys shall show the following information:

- horizontal control—by co-ordinate point method:

50'0" grid to cover entire site from an established base line (stakes for grid to be left in field) plus additional points necessary to locate all breaks in grade. Precision shall equal 1/500.

Locate following details from grid: buildings—state type of structure
 drives, walks, curbs, and cul-

verts—indicate type and surface materials
 stream, ponds, wells, springs—describe if necessary
 existing trees (over 6") give species and diameter
 fences, hedgerows and edges of wooded areas
 public roads, through or adjacent to property—give bearing and distance of tangents and all curve data
 locate rock outcrops, if any

Utilities:

locate all underground utilities on or within a reasonable distance of property; show all valves, M. H., connections, etc.
 locate power and telephone poles on or adjacent to site.
 give pressure of water and gas lines.

• vertical control—describe bench mark source and datum:

location of additional bench marks set by surveyor on property to complete survey
 elevations at 50'0" co-ordinate points and other ground points to nearest 0.1 of a foot. Show all spot elevations. Show contours, one foot interval
 elevation of all structures to nearest 0.01 of a foot

elevations required:

existing buildings: first floor, basement floor, ground grade at corners, steps and entrances
 roads and drives: along center-line sufficient to show profile

trees at base: high and low side if on slope
 inverts at sewers and culverts
 finished grade of all MH, valve boxes, grade slabs, steps, etc
 proposed profile by city ordinance, if any, of plotted but undeveloped streets

Surveyor may be required to locate proposed building in the field, giving ground elevation at corners and breaks in grade to facilitate footing design.

Questions often arise as to the need for this apparent maze of information. The following may help clarify and justify some of the items.

- this writer has learned never* to trust ground surveys that show contours only. The spot elevations taken by the surveyor are the only check the designer has. The spot elevations allow the designer to check both the interpolation of the surveyor—and the liberties taken in the name of interpolation. One instance comes to mind in which a surveyor interpolated between two spot elevations 300' apart. The explanation offered was that "the piece of ground is really level." A re-survey clarified the situation to the extent that the normal surface drainage pattern was determined.
 flat ground, if anything, justifies more 'shots' than less, for obvious drainage reasons, and shots should be extended outside property lines somewhat.

- many surveys have come across this desk showing contours but little else. Details and utilities add up to a substantial list that may influence a design—or the cost, depending on the disposition of such items.

- the most frustrating topo, I think, was the one needed for an addition to an existing building. The job was an excellent one—except that the first floor elevation of the building to be enlarged was missing.

The topography of the ground is a fascinating thing, and on a map it stimulates the imagination. The designer need not start with a blank sheet of paper and a set of room requirements. He can 'work from the outside in' so to speak. He can determine from the topo map that this area lends itself to play fields, this to parking, this to entrance drive, therefore gym should relate to play-fields, therefore classroom wing can relate here, etc., etc., and the design process is on.

A wise man once said that "the design is only as good as the research that goes into the problem." To the planning team, one of the problems is the site to be developed. The research is carried on by the surveyor and related to the designers in the form of the topographic map. This map will be only as good as you demand that it be.

* Aerial photogrammetric surveys are the exception.

Index to Volume XXX

For a number of years the Index to each volume of the *Journal* has appeared as a part of the issue. This practice has now been discontinued and the Index will no longer come to you as part of your magazine. The Index is, however, now available and will be sent free of charge upon request. The Index will be sent automatically to all libraries presently on our mailing list and will be included in each volume which is sent to the Institute for binding. Please address all requests for the Index to Office of the *Journal*, 1735 New York Avenue, Washington 6, D. C.

SCHOOL PLANT STUDIES

CENTRAL KITCHENS—THE ANSWER?

by RICHARD FLAMBERT

- PLANNING A CENTRAL KITCHEN
- ADVANTAGES AND DISADVANTAGES
- OTHER METHODS
- ECONOMY

THIS IS THIRTY-FIFTH OF A SERIES OF PAPERS PREPARED BY MEMBERS OF THE AIA COMMITTEE ON SCHOOL BUILDINGS, & BY SELECTED SPECIALISTS, TO MAKE LAYMEN AWARE OF SCHOOL BUILDING PROBLEMS & TRENDS & TO STIMULATE DISCUSSION. THEY ARE NOT INTENDED TO BE DEFINITIVE LAST WORDS & CARRY ONLY THE AUTHORITY OF THEIR RESPECTIVE AUTHORS. THE SERIES WILL BE EDITED BY THE COMMITTEE & ISSUED BY THE AIA DEPARTMENT OF EDUCATION & RESEARCH UNDER SPONSORSHIP OF THE AMERICAN ARCHITECTURAL FOUNDATION. MANY NEW SUBJECTS ARE BEING WORKED ON & CONTRIBUTED ARTICLES ARE WELCOME. WIDESPREAD DISTRIBUTION TO LAYMEN & EDUCATORS IS MADE OF THESE NON-TECHNICAL ARTICLES IN REPRINT FORM.

(one copy each issue free—additional copies 10¢ each)



All photos are of the Central Kitchen of the Norwalk, Calif. School District. It is designed for the production of 10-12,000 lunches per day.

CENTRAL KITCHENS—THE ANSWER?

by Richard Flambert*

DURING THE PAST ten years many school districts have introduced central kitchens into their food service operations in an attempt to solve the problem of sharp increases in food and labor costs. This trend is especially marked in the West. Central kitchens are areas where food is prepared not only to be served in a dining room in the same building, but to be transported to another school or schools for service there. Or, they might be in a separate building where all food is prepared for service elsewhere.

PLANNING A CENTRAL KITCHEN

The establishment of a central kitchen requires thorough planning. The maximum requirements must be forecasted from the standpoint of number of schools, size of student bodies, and percentage of participation.

The central kitchen should be conveniently located. In some areas it is better to have a separate building in the center of the district. In others it is better to build it in conjunction with a proposed secondary school. In some districts one central kitchen might do for the entire school system, while in others where a large territory is covered it might be better to build two or even more central kitchens.

The method to be used in getting the food from the central kitchen to the receiving schools is an important factor in planning. At present four main methods are used:

Vacuum Cans: Food is taken directly from the ranges, ovens, and refrigerators and placed in pans which go into vacuum containers. In the receiving schools the food is transferred to hot and cold sections of the serving tables. Main advantages of this system are:

- food is kept hot or cold
 - food carts are unnecessary
- Disadvantages are:**
- amount of time used in transferring food from one type of container to another

* Mr. Flambert is the senior partner of the firm of Flambert and Flambert, Food

• necessity for a serving table

Districts using the vacuum can method are generally satisfied with it.

Containers with tight fitting lids: Food is put into boxes, pans, or pots and transported to the schools, where the containers are placed on the serving table. This method works for short hauls, but too often food has to be reheated in the receiving schools.

Carts with hot and cold compartments: One section holds approximately 20 trays on which cold food is placed in the central kitchen. Another section contains pans of hot food. At the school the compartmented trays are removed from the cold section and the hot food is added to them. This method is costly because of the number of carts needed.

Electrically heated and cooled carts: Pans containing hot and cold foods are placed in separate sections of the cart. The cart is transported to a school, rolled off the truck and wheeled into position at the serving counter. Electric connections are reestablished and food is served directly from the cart. There is very little temperature change during transportation. Everything is included in the cart but milk, which is generally delivered directly to the school. This method is the one most generally used, and is the most successful.

These last two methods require the design and purchase of trucks (with hydraulic tail gates) which hold approximately 6 carts each.

Serving areas in the receiving schools must be set up. Required facilities are generally a three-compartment sink, a 30-cubic-foot reach-in refrigerator, an employees' locker room, a two-burner hot plate, a small storeroom, a work table, an ice cream cabinet, and a modified serving counter. It must be decided whether dishes, pans, silver, etc., will be washed and sanitized at the schools or returned to the central kitchen. There is a difference of opinion regarding this. Some think

that a central kitchen should handle everything but the actual serving of food, and others think this puts too much of a load on the central kitchen.

The central kitchen must be designed and equipped with all modern labor saving equipment. The menu pattern determines what equipment should be used for food preparation and service, and where it should be placed. Necessary equipment will equal the amount used by a large highschool kitchen if there are five to seven schools to be served. If more, large scale production equipment is necessary.

ADVANTAGES AND DISADVANTAGES

In theory, central kitchens are able to reduce costs by savings in purchasing, accounting, storing, quantity food preparation, and serving. However, this has not always worked out in practice. The kitchens have been successful in districts where a complete study of the situation was undertaken by school officials and their qualified consultants. The known advantages are:

- one person can be responsible for all phases of purchasing, receiving, storing, preparation, and transportation of food
- quality and uniformity of products can be assured.
- organizing and training one staff is more efficient than doing so for individual staffs
- it costs less to produce in large quantities
- better facilities and more time are available to plan new dishes and take advantage of modern technological changes
- receiving schools require a minimum amount of equipment and less space
- payroll expense is less since fewer man hours are required

Among the disadvantages mentioned by educators are:

- all food is the same—no choice possible. There should be sufficient variety in the menus to provide children with the food they like. However, it is difficult to allow free choice with a 25-30¢ plate lunch and still meet food and payroll costs.

DETAIL PHOTO OF FOOD CART. TWO RIGHT COMPARTMENTS FOR SALADS AND DESSERTS (NOTE COLD CARTRIDGE PARTIALLY EXTENDED AT TOP RIGHT). TWO LEFT COMPARTMENTS FOR HOT FOODS. TOP LIDS HOLD CONTAINERS OF BREAD, ETC. THREE HUNDRED MEAL CAPACITY.



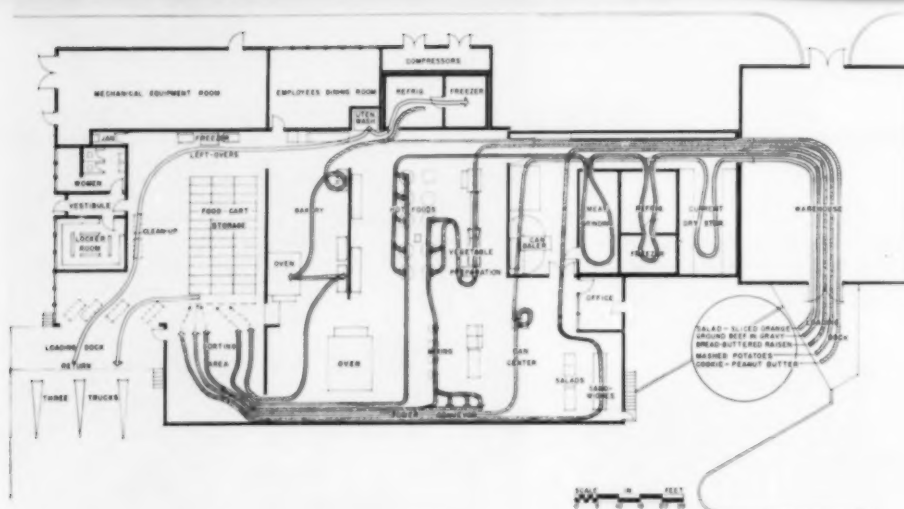
THE LOADING AREA. CARTS ARE HEATED FROM OVERHEAD ELECTRIC CABLES AND CHILLED BY DOLE PLATES.

A CART BEING LOADED ONTO A TRUCK FOR TRANSPORTATION TO AN INDIVIDUAL SCHOOL.



FOOD PUMP USED FOR TRANSFERRING HOT FOOD, SUCH AS SPAGHETTI WITH SAUCE, CHILI AND BEANS, BEEF STEW, ETC., FROM KETTLES TO SERVING PANS.





- no special dishes can be prepared for the teachers. But it must be remembered that the school lunch program is for the children and not for the faculty. The nutritious food is just as good for adults, who can get larger portions for a slightly higher price.
- many receiving schools have the same amount of equipment as regular kitchens. This fault lies in the planning.
- food is slopped in transportation. This has been remedied—carts are held rigidly in the trucks—items such as soup are no longer served
- children are unable to experience the appetizing odors of food and friendly attention of the individual school cafeteria. This is not exactly true, since these experiences occur at serving time under any circumstances.
- receiving schools over-order and left-over food is served as seconds or thrown out. This is a matter of planning. There is no justification for waste at any time.
- it is impossible to mass produce food and have it taste homemade. It is the duty of kitchen planners to avail themselves of all information regarding technological changes made in methods of production and in equipment. With proper supervision and care given to food production methods, the criticism given mass produced foods is not valid. It must be remembered that no two cooks or managers get the same results, and many children are penalized because of inferior cooking, which a central kitchen corrects.

OTHER METHODS

Are there any economical methods of cafeteria service, other than cen-

tral kitchens? In a large school district in California, *minimum marginal elementary school kitchens* were set up. In areas of approximately 800 square feet, the kitchen, storeroom, dish room, and serving line are included. 150 to 200 lunches are served daily, using the pre-assembled tray rack. This is simply a portable rack that is used just before meal time. Cold food, such as salad, dessert, juice, buttered bread, etc., is placed on each 10" x 14" compartmented plastic tray, together with silverware wrapped in a napkin. These trays are placed in the rack (48 in each rack) and wheeled to the serving counter. At meal time the hot entrée is placed on the counter. As each child passes the counter the attendant takes a tray from the rack with her left hand, dishes out the hot food with her right hand and passes the tray to the child, who picks up his carton of milk.

We have found that children can be served about as quickly as they can walk by the counter. When a double serving counter is used, we have clocked over 200 meals served in less than 5 minutes. This has proven to be so successful that other districts are using the same system. However, more supervision is required and managers are needed for each school.

In secondary schools the growing popularity of the "square" or "scramble" system has solved the problem of serving large numbers of children regularly. Students enter a square area, pick up their trays and silver from a table in the center of

the space and serve themselves at their own leisure. Hot foods are served by cafeteria personnel—usually not more than 2 people. The square space is planned to accommodate 20 to 30 people and there are at least 4 cashiers. This permits rapid service and eliminates the long line of students waiting for others to make up their minds. The more cashiers, the faster the service. The area usually has 2 means of entrance controlled by turnstiles with electric push-buttons. There is, of course, a need for control at the peak periods of serving. There are a number of these installations, in the East, Northwest, and in Southern California, which have proved very satisfactory.

It should be pointed out that where a central kitchen is part of a secondary school, the scramble system is possible and completely satisfactory.

ECONOMY

The cost of building and equipping schools is increasing rapidly, with no end in sight. It is imperative that school officials demand full value for the expenditure of taxpayers' money. Many, if not most, school cafeterias are too elaborately built and over-equipped. Considering the fact that cafeterias are generally used for only one meal, the use of space and equipment must be justified. This can be done through the use of central kitchens, minimum sized kitchens with pre-assembled tray racks, "squares" in serving in secondary schools, or a possible combination of any of the three systems.



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CALENDAR

December 3-4: Conference on Architecture for Adult Education, Purdue University, Lafayette, Indiana.

December 3-4: BRI Conference on Field Applied Paints and Coatings, Shoreham Hotel, Washington, D.C.

December 5-6: Annual General Meeting of the Architectural Institute of British Columbia. Hotel Georgia, Vancouver, B.C., Canada.

January 29-31: 1959 Annual Meeting, Province of Quebec Association of Architects, The Alpine Inn, St. Marguerite, P.Q., Canada.

February 5-7: 1959 Convention and Annual Meeting, Ontario Association of Architects, Royal York Hotel, Toronto, Ontario, Canada.

February 23-26: Annual Convention, American Concrete Institute, Statler Hilton Hotel, Los Angeles, California.

March 13-23: Middle Atlantic Regional Meeting, Greenbrier Hotel, White Sulphur Springs, W. Virginia.

April 18-25: Historic Garden Week in Virginia, sponsored by the Garden Club of Virginia.

April 24-25: Great Lakes Regional Conference, College of Architecture and Design, Ann Arbor, Michigan.

April 25-May 10: Twenty-second annual Maryland House and Garden Pilgrimage.

June 10-13: British Architect's Conference, Cardiff, Wales.

Archcrostic III



Necrology

According to notices received at The Octagon between September 30, 1958 and October 28, 1958

- FISK, PHILIP CLARK, Honolulu, T. H.
GARFIELD, ABRAM, FAJA, Cleveland, Ohio
LEWIS, HUGH C., Salt Lake City, Utah
MAGEE, JOHN G., London, Ontario, Canada
ROBERTSON, MAURICE H., Palos Verdes Estates, Calif.
ROWLAND, THOMAS, J., Miami, Fla.
SCHWERIN, HENRY W., Pittsburgh, Pa.
SEGERBERG, OLOV E., Jacksonville, Fla.
STRAUSS, ALVIN M., Ft. Wayne, Ind.
TROAST, N. LESTER, Bloomfield, N. J.
TURNER, PERCY P., North Miami, Fla.
WOHLER, JOSEPH H., Olympia, Wash.

HONORARY FELLOW

MAUNOURY, JEAN, Chartres, France

In the "Necrology" of the June 1958 issue of the *Journal* the name of Albert Jager, Jr., of Kalamazoo, Michigan, was erroneously listed. We are happy to report that Mr. Jager is alive and well. We can only say that we were informed of his "demise" by supposedly good authority—which was obviously very much in error.

New Overline
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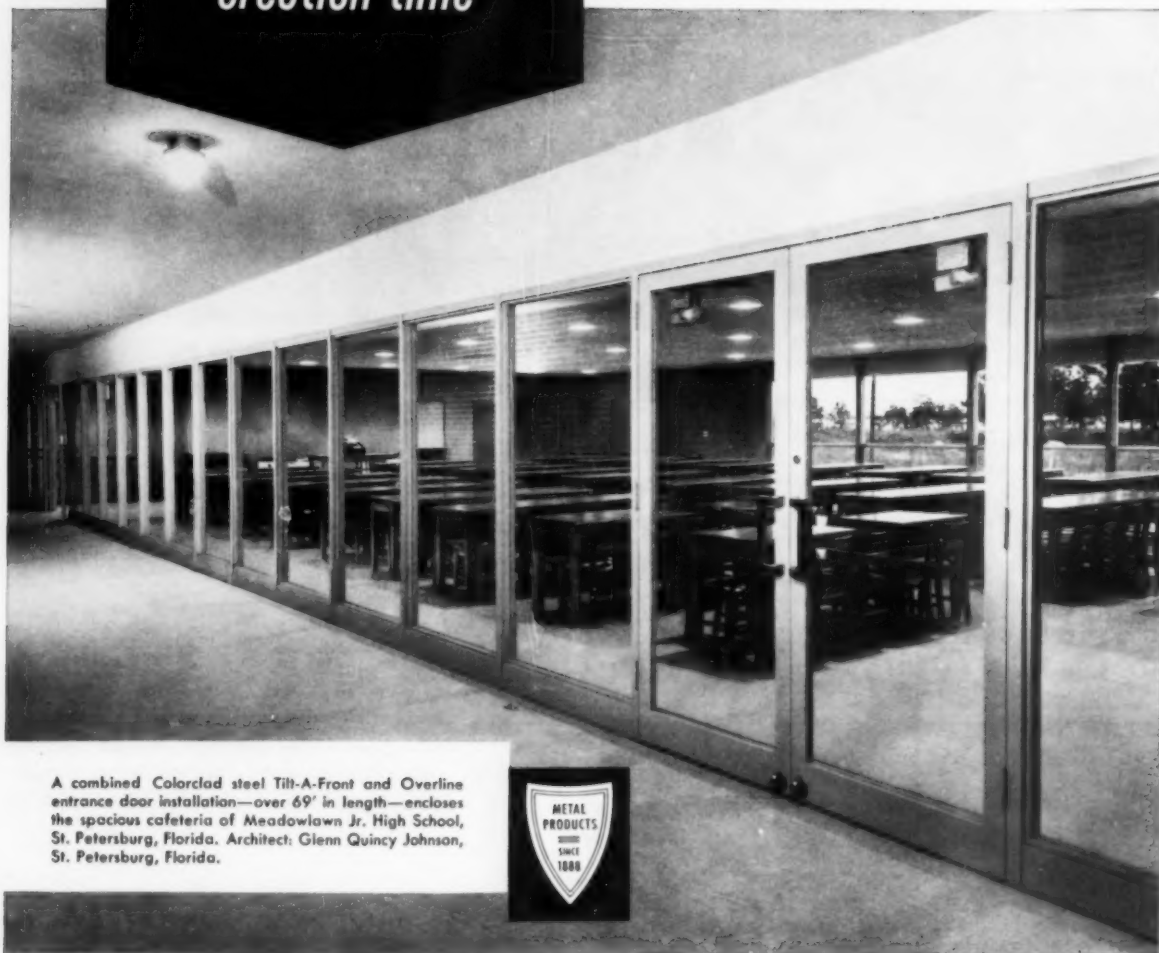
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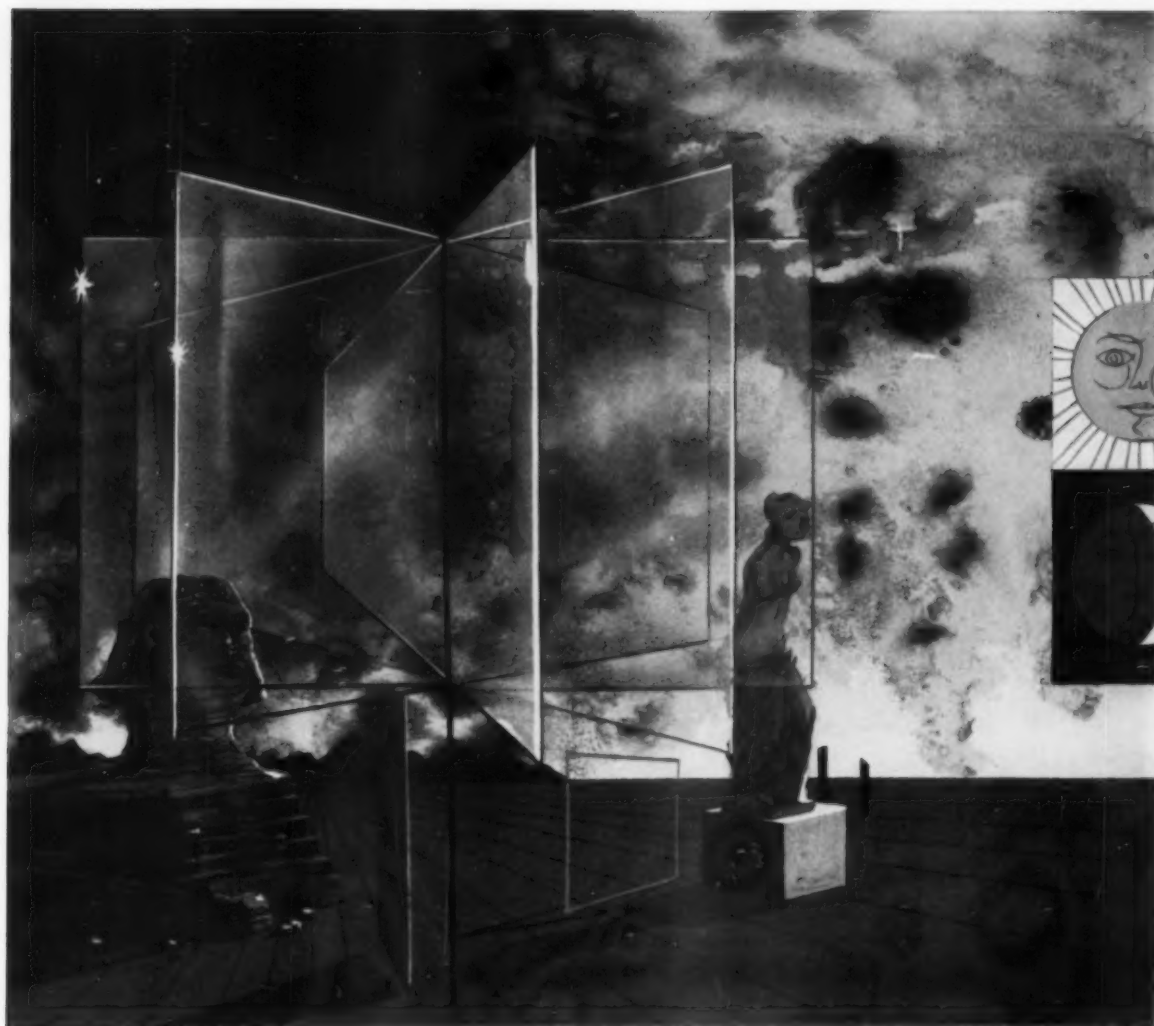
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See Sweet's Architectural File—Sections 7a, 13e, 16a, 16d, 21.



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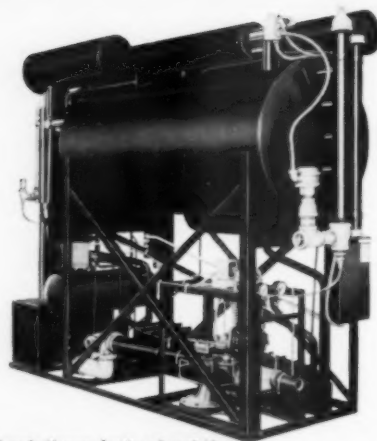
ARCHITECT: JOHN F. STANN; CONSULTING ENGINEER: J. B. WYBLE; BUILDER: SAM EIG

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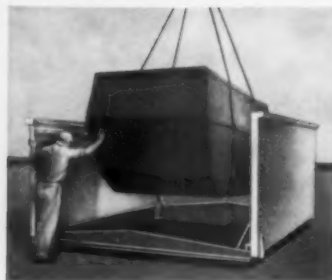
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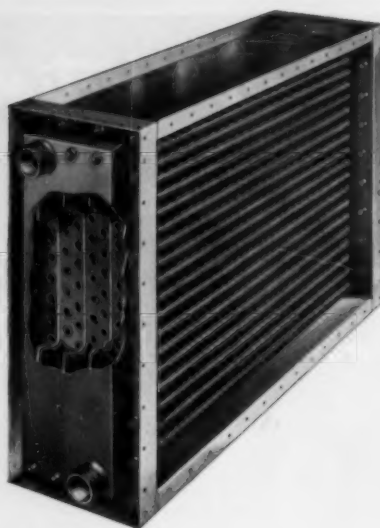
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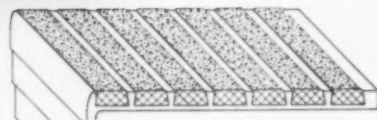


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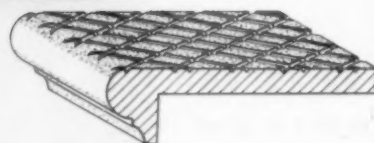


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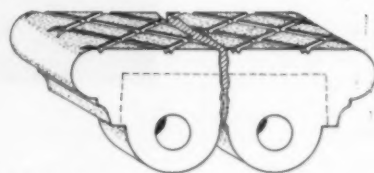


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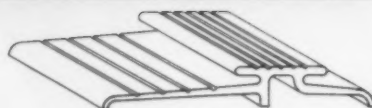


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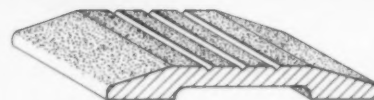


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